

12-2016

Preschool Teacher Self-Efficacy in an Urban School District

Charles Joseph Infurna
St. John Fisher College, cji01034@students.sjfc.edu

[How has open access to Fisher Digital Publications benefited you?](#)

Follow this and additional works at: http://fisherpub.sjfc.edu/education_etd

 Part of the [Education Commons](#)

Recommended Citation

Infurna, Charles Joseph, "Preschool Teacher Self-Efficacy in an Urban School District" (2016). *Education Doctoral*. Paper 272.

Please note that the Recommended Citation provides general citation information and may not be appropriate for your discipline. To receive help in creating a citation based on your discipline, please visit <http://libguides.sjfc.edu/citations>.

This document is posted at http://fisherpub.sjfc.edu/education_etd/272 and is brought to you for free and open access by Fisher Digital Publications at St. John Fisher College. For more information, please contact fisherpub@sjfc.edu.

Preschool Teacher Self-Efficacy in an Urban School District

Abstract

The purpose of this research was to assess the relationships between preschool teacher self-efficacy, as measured by the Teachers' Sense of Efficacy Scale (TSES) of years of early childhood teaching experience, and teacher outcomes as measured by the Classroom Assessment Scoring System (CLASS). Also considered was whether or not self-efficacy differed as a function of program setting. Early prekindergarten program (EPK) and universal prekindergarten program (UPK) (n = 89) lead teachers completed the TSES, representing a cross-section of all 3 and 4-year-old preschool lead teachers in a mid-sized urban district. Teachers completed the TSES via SurveyMonkey. CLASS observations were conducted as part of a larger ongoing evaluation. Teacher self-efficacy was not significantly correlated with years of early childhood teaching experience. However, overall, teacher self-efficacy was negatively correlated with years of teaching experience outside of the birth to second grade setting ($r = -.23, p < .05$) and positively correlated with the classroom organization domain ($r = .21, p < .05$) and overall CLASS scores ($r = .22, p < .05$). School district preschool teachers reported a significantly higher overall teacher self-efficacy compared to community-based organization (CBO) preschool teachers. This study adds to the current body of empirical literature focused on teacher self-efficacy and early childhood education by solely focusing on EPK/UPK teacher self-efficacy. Future studies should explore the potential relationship between job satisfaction and self-efficacy in both lead and assistant preschool teachers to inform interventions designed to increase job satisfaction and teacher self-efficacy.

Degree Type

Dissertation

Degree Name

Doctor of Education (EdD)

Department

Executive Leadership

First Supervisor

Susan Schultz

Subject Categories

Education

Preschool Teacher Self-Efficacy in an Urban School District

By

Charles Joseph Infurna

Submitted in partial fulfillment
of the requirements for the degree
Ed.D. in Executive Leadership

Supervised by

Dr. Susan M. Schultz

Committee Member

Dr. Donna Riter

Ralph C. Wilson, Jr. School of Education

St. John Fisher College

December 2016

Copyright by
Charles Joseph Infurna
2016

Dedication

I would like to acknowledge so many people that contributed to helping make this dissertation journey a reality. First, to my wife, Laura, thank you for your unwavering unconditional love and support. I would never have applied to the DEXL program at St. John Fisher College without your encouragement. You have certainly been “supermom” as the courses became more difficult, time consuming, and involved with navigating the dissertation journey. Throughout this process, you have provided extra patience, time, and love that I will never be able to thank you for. ILYL!

To my children, Joseph James and Dominic Francesco. Thank you for letting Daddy get his homework done in the basement while you played upstairs and watched Elmo. You have been my consistent motivation throughout this process. Daddy loves you! To my parents, Joseph and Anna. The continuous love, support, guidance, and work ethic you instilled in me has molded me into the father and husband I am today. You both came to the United States in search of the “American Dream.” I hope that with the completion of this dissertation that I have been able to fulfill part of that dream for the both of you. Thank you, and I love you. To my brother, Frank. Thank you for going through this dissertation progression with me. Your insight and wisdom with the program helped me more than you can imagine. Thank you, and I love you. To my in-laws, Jim and Kathy Walther, thank you for sacrificing your time over the past two and half years while I completed this dissertation. Your energy and efforts while I spent time away from our family is truly appreciated. Thank you, and I love you.

To my mentor and friend, A. Dirk Hightower, PhD. When others wouldn't, you took a chance on hiring me last year. I'm grateful for the opportunity you and the entire Children's Institute staff have provided to my family and me. From our first field experience together, you have guided me through a murky and cloudy path toward shaping my dissertation theory and framework. I am forever in your debt. Thank you.

To my dissertation chair, Dr. Susan Schultz, I could not have asked for a more thorough, patient, and committed chair. I cannot thank you enough for all the guidance, support, and wisdom you have provided to me these past 2 years. To my committee member, Dr. Donna Riter, your keen insight and persistence through this process has helped me become a more critical researcher and writer. You motivated me throughout this entire right of dissertation passage. Thank you. To my research family at Children's Institute, especially Stas Lotyczewski, thank you for giving me the opportunity to become a member of the Children's Institute family. Your humor, statistical expertise, and suggestions made this process less turbulent. I wouldn't have been able to complete much of this dissertation without your programming assistance. It is so greatly appreciated! Thank you.

Dr. Guillermo Montes, thank you for talking me through some of life's rough patches with you. Your phone call 2 years ago has since given me a clear direction and focus into how I want to move forward with my future endeavors. Thank you. To Marji and Melissa, your willingness to listen when nobody else would is appreciated. Your writing suggestions and recommendations can be seen throughout my dissertation. Thank you.

Finally, thank you to all my professors who have shared your knowledge and experiences with me; especially to Dr. Jeannine Dingus-Eason and Dr. Marie Cianca, you saw something in me 2 years ago that has ultimately shaped my life moving forward. I cannot begin to thank the both of you enough—through both the good and not so good times that I have shared with you. Thank you.

Biographical Sketch

Charles Joseph Infurna has dedicated himself to the field of education for over 10 years. He is currently an Information Analyst at Children's Institute, Inc., which is affiliated with the Department of Clinical and Social Sciences in Psychology at the University of Rochester. Mr. Infurna attended SUNY Fredonia from 2000 to 2004 and graduated in May of 2004 with a Bachelor of Arts degree in Childhood Education 1-6 with a concentration in Social Studies. He continued to study at SUNY Fredonia from May 2004 to December 2005 and graduated with a Master of Sciences degree in Curriculum and Instruction in December of 2004. While completing his graduate work, Charles was employed by Erie 2-BOCES, located in Fredonia, NY, as Prevention Education Specialist. Mr. Infurna completed the School Building Leadership program at SUNY Fredonia in December of 2009 with an eye toward a career in administration. During this time, he served as a Staff Development Specialist for Erie-2 BOCES. Shortly thereafter, Charles and his wife, Laura, moved back to Rochester, NY. From there, Mr. Infurna transitioned to a position as Head Start Director in Williamson, NY, and then to Head State Education Specialist for the Volunteers of America Children's Center (VOACC) in Rochester. It was while he was employed with VOACC, in the summer of 2014, that Charles came to St. John Fisher College and began his doctoral studies in the Ed.D. Program in Executive Leadership. Mr. Infurna pursued his research in early childhood teacher self-efficacy under the direction of Dr. Susan M. Schultz and received the Ed.D. degree in 2016.

Abstract

The purpose of this research was to assess the relationships between preschool teacher self-efficacy, as measured by the Teachers' Sense of Efficacy Scale (TSES) of years of early childhood teaching experience, and teacher outcomes as measured by the Classroom Assessment Scoring System (CLASS). Also considered was whether or not self-efficacy differed as a function of program setting. Early prekindergarten program (EPK) and universal prekindergarten program (UPK) ($n = 89$) lead teachers completed the TSES, representing a cross-section of all 3 and 4-year-old preschool lead teachers in a mid-sized urban district. Teachers completed the TSES via SurveyMonkey. CLASS observations were conducted as part of a larger ongoing evaluation. Teacher self-efficacy was not significantly correlated with years of early childhood teaching experience. However, overall, teacher self-efficacy was negatively correlated with years of teaching experience outside of the birth to second grade setting ($r = -.23, p < .05$) and positively correlated with the classroom organization domain ($r = .21, p < .05$) and overall CLASS scores ($r = .22, p < .05$). School district preschool teachers reported a significantly higher overall teacher self-efficacy compared to community-based organization (CBO) preschool teachers. This study adds to the current body of empirical literature focused on teacher self-efficacy and early childhood education by solely focusing on EPK/UPK teacher self-efficacy. Future studies should explore the potential relationship between job satisfaction and self-efficacy in both lead and assistant

preschool teachers to inform interventions designed to increase job satisfaction and teacher self-efficacy.

Table of Contents

Dedication	iii
Biographical Sketch	vi
Abstract	vii
Table of Contents	ix
List of Tables	xi
List of Figures	1
Chapter 1: Introduction	1
Problem Statement	3
Theoretical Rationale	5
Statement of Purpose	17
Research Questions	19
Significance of the Study	21
Definition of Terms	22
Chapter Summary	23
Chapter 2: Review of the Literature	25
Introduction and Purpose	25
Gaps and Recommendations for Future Research	36
Chapter Summary	37
Chapter 3: Research Design Methodology	39
Introduction	39

Research Context	40
Research Participants and Setting.....	41
Procedures for Data Collection and Analysis	42
Instruments Used in Data Collection	45
Chapter Summary	49
Chapter 4: Results	50
Research Questions.....	50
Data Analysis and Findings	50
Teacher Self-Efficacy and Years of Experience.....	51
Teacher Self-Efficacy and Teacher Outcomes	55
Summary of Results	57
Chapter 5: Discussion	59
Introduction.....	59
Implications of Findings	59
Limitations	69
Recommendations.....	71
Conclusion	73
References.....	76
Appendix A.....	83
Appendix B.....	84
Appendix C.....	85
Appendix D.....	86

List of Tables

Item	Title	Page
Table 3.1	Long Form 24-item Teacher Self-Efficacy Scale Reliability Estimates	47
Table 4.1	Teacher Self-Efficacy Subscale Score Means and Standard Deviations (<i>n</i> = 89)	52
Table 4.2.	Years of Teaching Experience Means and Standard Deviations (<i>n</i> = 120)	52
Table 4.3	Intercorrelations Between Teacher Self-Efficacy and Years of Teaching Experience (Full Sample: <i>N</i> = 79)	54
Table 4.4	Teacher Self-Efficacy by Program Type	55
Table 4.5	CLASS Domain Scores (<i>n</i> = 89)	56
Table 4.6	Intercorrelations Between CLASS Scores and Teacher Self-Efficacy (Full Sample: <i>N</i> = 78)	56

List of Figures

Item	Title	Page
Figure 1.1	Teachers' Sense of Efficacy	9

Chapter 1: Introduction

In support of the idea that high-quality preschool programs are related to positive developmental outcomes of young children and their future school success, federal and state governments invest considerable public funds in preschool programs within the United States (Mashburn et al., 2008; Meisels, 2006). Publicly investing in high-quality prekindergarten programming provides a wide array of significant benefits to children, families, and society as a whole. Some of those benefits are higher scores on academic formative assessments, fewer referrals to special education, and a decreased likelihood of a child repeating a grade or engaging in criminal activity (Lynch & Vaghul, 2015).

Although a nationwide commitment to a high-quality, early childhood education in the United States would be costly, estimated at about \$26 billion a year, evidence suggests that, over time, investing in early childhood education programs would outweigh government costs (Lynch & Vaghul, 2015). In spite of limited information regarding the investment of high-quality, early childhood education programs, many other countries around the globe have recognized the critical need for an increased investment in preschool education, including China, India, Brazil, Indonesia, and Turkey (Guo, Justice, Sawyer, & Tompkins, 2011a). For example, China has already invested more than \$625,000,000 to enroll over 22,000,000 children, aged 3-6 years, in preschool education (Levine, 2005).

Policymakers, early childhood practitioners, and researchers also have suggested that efforts are needed to improve the quality of preschool education for young children,

while also ensuring the quality of preschool teaching (Barnett, 2003). Long-term studies of early childhood students, especially in prekindergarten, consistently found that investing in their future has a large number of lasting and important benefits for their families and society as a whole. Some of these benefits include: higher levels of verbal, mathematical, and general intellectual achievement; greater success in school; less welfare dependency; better health outcomes; and lower crime rates (Lynch & Vaghul, 2015).

In light of the relationship between early childhood education experiences and later functioning, empirical studies have explored what aspects of the early childhood education environment are associated with student outcomes. Studies have established the importance of preschool teachers' self-efficacy to classroom quality, cognitive development, and fostering child academic achievement (Guo, Piasta, Justice, & Kaderavek, 2010; Justice, Mashburn, Hamre, & Pianta, 2008). In the field of education, teacher self-efficacy is defined as a "teacher's belief in his or her own capability to organize and execute courses of action required to successfully accomplish a specific teaching task in a particular context" (Tschannen-Moran, Woolfolk Hoy, & Hoy, 1998, p. 233). A better understanding of the factors that influence teacher self-efficacy may be crucial to ensuring the quality and effectiveness of preschool teaching. Identifying attributes of teachers and classrooms that are linked to teacher self-efficacy could inform efforts aimed at developing innovative approaches designed to increase teacher self-efficacy (Guo et al., 2011a, 2010).

Policymakers in the US have established qualification standards for teachers employed within preschool programs to ensure that children are receiving high-quality

experiences (Barnett, 2005; School Readiness Act, 2005). Public preschool teachers in New York State are required to hold a bachelor's degree in early childhood education (B-2 teaching certificate), and earn a graduate degree in education within 5 years of being hired (New York State Education Department [NYSED], 2015). Whether in a district preschool classroom, a community-based organization (CBO), or a Head Start program, the certification requirements remain the same. These requirements, according to No Child Left Behind (NCLB, 2001) legislation, define what a "highly-qualified" preschool teacher represents. No Child Left Behind legislation defines "highly qualified" teachers, in general, as having a bachelor's degree, meeting state licensing or certification standards, and demonstrating competence in the content they teach. In spite of the requirements defined by No Child Left Behind legislations, teachers' qualifications, academic major, and general competency credentials have not been consistently linked to higher classroom quality or the academic achievement of children (Early et al., 2006, 2007; Justice et al., 2008; LoCasale-Crouch et al., 2007). In contrast, self-efficacy is one preschool teacher characteristic that has been found to be associated with higher quality classroom instruction and child achievement (Guo et al., 2010; Justice et al., 2008).

Problem Statement

The concept of self-efficacy, as the core of social cognitive theory, refers to an individual's judgement of his or her capability to perform actions at a designated level of achievement and execution (Bandura, 1997). Individuals who believe that they will be successful on a given task are more likely to achieve the desired results because they allocate a great deal of effort, are persistent in the face of setbacks, and develop coping mechanisms for managing any negative events (Bandura, 1986, 1997). According to

social cognitive theory, personal factors and context interact through the process of reciprocal determination (Bandura, 1986, 1997). Self-efficacy, therefore, is influenced by both personal and contextual factors.

Given that student achievement and school type (public, private, charter, early childhood, and school age) have been shown to be associated with teacher self-efficacy, Chong, Klassen, Huan, and Kates (2010) recommended that future studies should examine preschool teacher self-efficacy. To support their recommendation, previous empirical studies have reported that changes in teachers' self-efficacy beliefs have been correlated to years of teaching experience and teacher outcomes (Guo et al., 2011a, 2010; Hoy & Woolfolk, 1993; Woolfolk Hoy & Spero, 2005). Guo et al. (2010), for example, found that experienced early childhood teachers, especially preschool teachers, reported having higher self-efficacy compared to their less-experienced peers (Guo et al., 2010). It has been shown that preschool teachers who report having high self-efficacy tend to receive higher classroom outcomes compared to less-experienced peers (Guo et al., 2011b; Woolfolk Hoy & Spero, 2005).

As noted above, teachers' qualifications, academic major, and general credentials are not consistently linked to improved classroom quality or children's academic achievement (Early et al., 2006, 2007; Justice et al., 2008; LoCasale-Crouch et al., 2007). Self-efficacy, however, is the one preschool teacher characteristic that has been associated with higher quality classroom instruction and increased child achievement (Guo et al., 2010; Justice et al., 2008). For example, preschool teachers' self-efficacy has been shown to be a significant predictor of classroom quality and children's gains in

literacy (Justice et al., 2008) as well as effective classroom management (Klassen & Chiu, 2010).

With the apparent value of preschool teachers' sense of efficacy, it is surprising that research examining teachers' sense of efficacy remains limited. Theoretical models of self-efficacy posit that it is context specific and indicate that teacher self-efficacy can be influenced and shaped by a number of contextual variables in school settings (Bandura, 1986). These contextual variables may include both (a) teacher characteristics, such as teaching experience and sense of community (Guo et al., 2010; Hoy & Woolfolk, 1993), and (b) classroom characteristics, such as children's engagement (Ross, Cousins, & Gadalla, 1996).

Previous research has also linked teacher self-efficacy with teaching behaviors, the amount of effort exerted and extent of persistence, as well as cognitive and emotional reactions when dealing with difficult or unmotivated students (Klassen, Tze, Betts, & Gordon, 2011). For example, in one of the earliest studies on teacher self-efficacy, Gibson and Dembo (1984) observed that lower efficacy teachers tended to criticize students who responded incorrectly to problem questions. Compared to their peers, higher efficacy teachers, instead, praised students for trying to solve problems. Higher efficacy teachers also tended to persist more with students who were struggling academically and engaged in monitoring and observing students' time spent working on activities in their seats.

Theoretical Rationale

History of social cognitive theory and self-efficacy. According to Bandura's (1997) social cognitive theory, self-efficacy refers to individuals' beliefs about their

capacities to successfully carry out a particular course of action. Research on teachers' self-efficacy dates back to educational studies carried out by the RAND organization in the mid-1970s, when two questionnaire items were developed to investigate teachers' beliefs in their ability to influence student achievement (Tschannen-Moran et al., 1998). With the work of Rotter (1966) as a base, the RAND researchers conceptualized teacher efficacy as the extent to which teachers believed that they could control the emphasis of their actions, whether their control of reinforcement lay within them, or the environment (Tschannen-Moran & Woolfolk Hoy, 2001).

Bandura (1977) defined perceived self-efficacy as "the beliefs in one's capabilities to organize and execute the courses of action required to produce given attainments" (p. 3). Self-efficacy is a future-oriented belief about the level of competence a person expects he or she will display in a given situation. Self-efficacy beliefs, according to Bandura (1977), "influence thought patterns and emotions that enable actions in which people expend substantial effort in pursuit of goals, persist in the face of adversity, rebound from temporary setbacks, and exercise some control over events that affect their lives" (p. 4). In this context, an individual's conviction that he or she can orchestrate the necessary actions to perform a given task is an efficacy expectation. Social cognitive theory proposes a second kind of expectation, termed outcome expectancy, which is the individual's estimate of the likely consequences of performing that task at the expected level of competence (Bandura, 1986). Bandura asserted that because the actions needed to perform a given task stem from the projected level of competence a person expects to bring to a given situation, outcome expectancies add little to the predictive power of efficacy measures.

Self-efficacy is grounded in the theoretical framework of social cognitive theory emphasizing the involvement and exercise of human agency in which people can exercise some influence over what they do (Bandura, 2006). Bandura (2006) maintained that in this view, people are proactive and self-reflecting. From this perspective, self-efficacy affects one's goals and behaviors and is influenced by one's actions and conditions in the environment (Schunk & Meece, 2006). Efficacy beliefs determine how environmental opportunities and obstructions are perceived (Bandura, 2006) and affect the choice of an activity, how much effort is expended on the activity, and how long people will persevere when confronted with obstacles (Pajares, 1992). An impressive body of research supports the claim that self-efficacy has an important influence on human behaviors in a variety of settings, such as education, health, sports, and business (Bandura, 1997). Although Bandura (1997) stressed that the self-efficacy beliefs people hold play an important role in their functioning, he recognized that individuals do not work as social isolates. People form beliefs about the collective capabilities of the group to which they belong. He defined collective efficacy as, "a group's shared belief in its conjoint capabilities to organize and execute the courses of action required to produce given levels of attainments" (p. 477). Similar to the role that self-efficacy plays within individuals, collective efficacy beliefs affect group performance in education. Teachers' collective efficacy refers to the beliefs teachers possess in their collective capabilities to influence the lives of their students (Bandura, 1993).

Teacher sense of efficacy was first conceptualized in the two RAND Corporation evaluation studies (Ashton, Buhr, & Crocker, 1984). The 1976 RAND study of school-preferred reading programs in Los Angeles, conducted by Armor et al. (1976), reported a

strong and significant relationship between teachers' sense of efficacy and increases in students' scores on standardized reading tests. A second study conducted by the RAND Corporation, evaluating teachers' uses of innovations, reported that "teacher sense of efficacy is positively related to the percent of project goals achieved, the amount of teacher change, improved student performance, and continuation of both project methods and materials" (Berman, McLaughlin, Bass, Pauly, & Zellman, 1977, p. 137). Ashton and Webb (1982) reported a significant relationship between teachers' sense of efficacy and student achievement on the Metropolitan Achievement Test in high school basic skills classes in mathematics and language. Self-efficacy was measured in each of these studies by adding the scores of two Likert scale items (1 = strongly agree to 5 = strongly disagree). The two items are as follows:

1. When it comes right down to it, a teacher really can't do much because most of a student's motivation and performance depends on his or her home environment.
2. If I really try hard, I can get through to even the most difficult or unmotivated students. (Ashton & Webb, 1982, p. 30)

Given that Ashton and Webb (1982) suggested that teacher efficacy is an important teacher characteristic related to student achievement, the focus of their research was to investigate two possible approaches to the measurement of teacher efficacy, specifically to determine whether teachers' sense of efficacy is a self- or norm-referenced construct.

Ashton et al. (1984) found that RAND item one was significantly correlated with RAND item two. Figure 1.1 presents the authors' conception of teacher efficacy as a hierarchically organized, multidimensional construct.

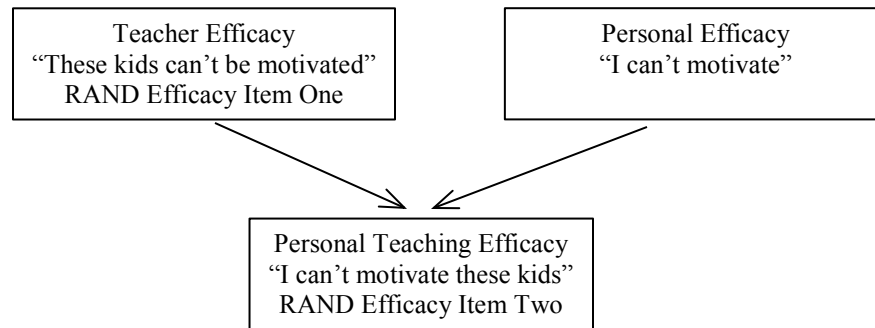


Figure 1.1. Teachers' Sense of Efficacy. Adapted from “Measurement Problems in the Study of Teachers' Sense of Efficacy,” by P. Ashton, S. Olejnik, L. Crocker, & M. McAuliffe, 1982. Paper presented at the annual meeting of the American Educational Research Association, New York, NY.

The dimension located on the left of the model labeled Teacher Efficacy refers to the belief measured by RAND item one—the teacher's assessment of his or her ability to educate students. On the right side of the model is Personal Efficacy. When combined, the two dimensions become RAND item two, the teacher's sense of personal competence as a teacher. Ashton et al. (1984) assert that the most specific level of conceptualization and best predictor of teacher behavior is the teacher's sense of personal teaching efficacy, represented by the integration of personal efficacy and teaching efficacy. Conceptually, it is important to keep these two dimensions separate from one another. It is likely that the most appropriate strategy for teacher change depends on the origin of the sense of efficacy (Ashton et al., 1984).

In the first RAND study, 20 elementary schools in Los Angeles, CA were purposively selected for participation, having met the criteria of a majority Mexican-American and/or African American student body and a minimum of 400 enrolled students (Armor et al., 1976). Longitudinal data were collected on students over the course of 4 years. Teacher background characteristics and predisposition data were collected for: race, ethnicity, college attended, and undergraduate major. The RAND researchers “found no evidence of a relationship between any of these characteristics and students’ reading achievement” (Armor et al., 1976, p. 34). In addition, teachers’ individual attitudes toward teaching in minority schools were measured by their sense of efficacy (Figure 1.1). The responses to the questions, shown in Figure 1.1, were combined into a single measure of teacher self-efficacy, “the extent to which the teacher believes he or she has the capacity to produce an effect on the learning of students” (p. 34).

Ashton et al. (1982) developed a more extensive instrument based on a broader conceptualization of efficacy to overcome the limitations (length of questionnaire and items solely focused on self-efficacy) presented in the two-item RAND efficacy measure. The scope of teachers’ sense of efficacy was broadened to encompass teachers’ confidence in their ability to carry out all the responsibilities of teaching, whereas the RAND questions focused on a teacher’s belief in his or her ability to get through to students, despite the motivational or environmental obstacles encountered. Ashton et al. (1982) developed a 50-item Personal Teaching Efficacy Vignette Scale (PTEVS) constructed on the basis of teachers’ responses to a teaching incidents essay that asked teachers to describe their most effective and least effective teaching experiences. The

resulting PTEVS consisted of 50 descriptions of problem-based situations of teaching, including motivation, discipline, academic instruction, planning, evaluation, and work with parents. Ashton et al. (1982) hypothesized that these situational vignettes would elicit more teacher variability “since they provide a concrete referent that teachers have probably confronted in some form in their teaching experience” (p. 33).

The results of the research showed that the means for the self- and norm-referenced measures were not significantly different at the .05 level. Internal consistency was high for both the self-referenced ($r = .95$) and norm-referenced ($r = .94$) instruments. However, the norm-referenced approach was significantly correlated with the total efficacy score as measured by the RAND items ($r = .35, p < .05$), while the self-referenced vignettes were not significantly correlated with either RAND item, or with the total score of the RAND items ($r = .09, p > .05$) (Ashton et al., 1984). Based on their results, Ashton et al. (1984) suggested that teachers evaluate their effectiveness in terms of their own performance, rather than compared to the performance of other teachers. Up until this point, Ashton et al. (1984) indicated that teachers have very little information regarding the performance of other teachers beyond informal conversations. Unfortunately, due to their lack of interaction among themselves, teachers are likely to base their self-evaluation on a limited and possibly biased perception of the effectiveness of others (Ashton et al., 1984).

Teacher self-efficacy instruments. According to Gibson and Dembo (1984), “Self-efficacy beliefs would indicate teachers’ evaluation of their abilities to bring about positive student change” (p. 570). Bandura’s (1977) theoretical predictions of initiation and persistence suggest that persons high on both self-efficacy variables will respond

more positively to student characteristics within their classroom. Conversely, teachers who show a lack of initiation and persistence on both self-efficacy variables will respond more negatively to student characteristics in their classroom.

Gibson and Dembo's (1984) influential measure of teacher efficacy extended the RAND measure (Armor et al., 1976), which consisted of two efficacy factors, one measuring personal teaching efficacy and the other measuring general teaching efficacy. Personal teaching efficacy (PTE) measures teachers' competence beliefs. General teaching efficacy (GTE) measures teachers' expectancy beliefs that their effectiveness is limited by environmental obstacles. Concerns with the Gibson and Dembo measure, especially with the GTE factor, led to further discussion about the measurement and validity of teachers' self-efficacy. Henson, Kogan, and Vacha-Haase (2001) questioned the continued use of the GTE subscale due to problems with reliability and questionable construct validity. Most of the validity-focused apprehension centered on the external orientation of the GTE factor, which focused not on a teacher's confidence or beliefs about his or her capabilities to teach but on external constraints that influence student outcomes (Henson et al., 2001).

Shortly after the first RAND study was published in 1976, Guskey (1981) developed a 30-item instrument measuring responsibility for student achievement (RSA) (Guskey, 1981). For each item, participants were asked to distribute 100 percentage points between two alternatives, one stating that an event was caused by the teacher and the other stating that it occurred because of factors outside of the teacher's immediate control. Consistent with explanations from attribution theory (Weiner, 1979), four types of causes were offered for success or failure: specific teaching abilities, the effort put into

teaching, the task difficulty, and luck (Weiner, 1992). In general, the teachers assumed greater responsibility for positive results than for negative results. Teachers were more confident in their ability to influence positive outcomes than to prevent negative ones. Greater efficacy was related to a high level of confidence in teaching abilities on a measure of teaching self-concept (Guskey, 1984).

Defining teacher self-efficacy. Teacher self-efficacy refers to teachers' beliefs that they can bring about desirable changes in pupils' behavior and achievement (Guo et al., 2010). This definition reflects the context-specific nature of self-efficacy. Specifically, the self-efficacy of a teacher may be speculated to vary across different classrooms, as different classes often vary in size and composition of students. Therefore, it is important to examine the role of teacher characteristics and classroom context in teachers' self-efficacy (Tschannen-Moran et al., 1998).

Previous researchers have suggested that differences in teacher characteristics may affect a teacher's sense of efficacy (Wolters & Daugherty, 2007). Although teaching experience may be one teacher characteristic that is related to teacher self-efficacy, findings concerning the impact of teaching experience have been inconsistent (Cheung, 2008). Still, there are researchers who have found a positive correlation between teacher self-efficacy and teaching experience among preschool, primary, and secondary teachers (Cheung, 2008; Hoy & Woolfolk, 1993; Wolters & Daugherty, 2007). For instance, within U.S. educational research, Wolters and Daugherty (2007) found that preschool through 12th grade teachers with more years of teaching experience reported higher levels of efficacy. In China, Cheung (2008) found that for both Hong Kong and Shanghai elementary school teachers, longer teaching experience was a significant

predictor of higher teacher efficacy. In contrast, other studies published in the United States found contradictory results. Early et al. (2007) found that years of teaching experience and level of education in Head Start teachers did not directly correlate with student achievement or teacher efficacy. Similarly, Guo et al. (2010) reported that early childhood education teachers, such as preschool teachers that had more years of preschool teaching experience negatively correlated to their self-efficacy. Since these contradictory findings are present, the possible direct correlation between teaching experience and sense of efficacy requires further investigation, particularly for preschool teachers, as this group has been neglected in the literature.

Based on social cognitive theory, teacher self-efficacy may be conceptualized as individual teachers' beliefs in their own ability to plan, organize, and carry out activities that are required to attain given educational goals (Skaalvik & Skaalvik, 2010). Following this conceptualization, Bandura's (1997, 2006) recommendation for item construction should be followed when measuring teacher self-efficacy, because: (a) self-efficacy is concerned with perceived capability, the items should contain verbs like "can" or "be able to" in order to make clear that the items ask for mastery expectations because of personal competence; (b) the object in each statement should be "I," because the aim is to assess each teacher's subjective belief about his or her own capability, and; (c) each item should contain a barrier. The point is underlined by Bandura (1997) stating that, "If there are no obstacles to surmount, the activity is easy to perform, and everyone has uniformly high perceived self-efficacy for it" (p. 42).

According to social cognitive theory, self-efficacy affects both cognitions and emotions (Pajares, 1992). Mastery expectations influence how people perceive

opportunities and obstacles in the environment (Bandura, 2006), and they affect choices, effort, and endurance when working with difficult tasks. Bandura (1997) hypothesized that people with low mastery expectations would dwell on their own weaknesses and enlarge possible threats.

An individual teacher may also have beliefs both about the ability of the team and of the faculty of teachers at the school to perform at a level that produces successful outcomes for students. (Skaalvik & Skaalvik, 2010). Such beliefs represent perceived collective teacher efficacy (Bandura, 1997; Goodard & Goodard, 2001; Goodard, Hoy, & Woolfolk Hoy, 2004). Unfortunately, few studies have explored the relation between perceived collective efficacy and individual teacher self-efficacy (Skaalvik & Skaalvik, 2010). The few available studies suggest a moderate positive relation both between perceived collective efficacy and individual teacher self-efficacy (Goddard & Goddard, 2001; Skaalvik & Skaalvik, 2007).

On theoretical ground, one could argue that it is reasonable to predict that perceived collective efficacy affects individual teacher self-efficacy. Schools characterized by high collective teacher efficacy set challenging goals and are persistent in their effort to meet these goals (Skaalvik & Skaalvik, 2010). Goddard, Hoy, & Woolfolk (2000) argued that these high expectations create a normative press that encourages all teachers to do what it takes to excel and discourages them from giving up when faced with difficult situations. Skaalvik and Skaalvik (2009) proposed that such a cultural context promotes students' achievements, which, in turn, enhance individual teachers' sense of self-efficacy. We can, therefore, expect that individual teacher self-

efficacy and collective teacher efficacy are positively related. However, it is not obvious that being part of a strong team always increases self-efficacy for all team members.

Based on Rotter's (1966) distinction between external and internal control, teacher self-efficacy has been assumed to increase if teachers believe that the students' achievement and behavior can be influenced by education (Guskey, 1988). Accordingly, teacher-self efficacy has also been assumed to decrease if teachers believe that factors external to teaching (student ability and home environment) are more important to the students' learning than the influence that a teacher may have (Skaalvik & Skaalvik, 2010). These assumptions have led some researchers to measure teachers' general beliefs about limitations to what can be achieved through education, which is often referred to as teaching efficacy (Soodak & Podell, 1996). Since external control may be confounded with teacher self-efficacy, it is important to test how strongly these constructs are related, and if they relate differently to school context variables and to teacher job satisfaction (Skaalvik & Skaalvik, 2010).

Along with Bandura's (1977) definition of self-efficacy, Gibson and Dembo (1984) defined teacher self-efficacy as how capable teachers feel about making positive changes to their students' demeanor and overall successes. Teachers not feeling comfortable with their perceived self-efficacy may not be able to influence student behaviors or affect child achievement. (Dembo & Gibson, 1985). Hoy and Woolfolk (1993) suggest that variability among self-efficacy may be persistent between elementary and secondary teachers. For instance, Hoy and Woolfolk (1993) reported that two teacher characteristics have previously been linked to teacher self-efficacy (education background and years of teaching experience). Hoy and Woolfolk (1993) reported that

teachers with greater levels of education (graduate degree as compared to bachelor's degree) and more years of teaching experience resulted in higher self-reported teacher self-efficacy.

Statement of Purpose

The purpose of this study was to examine what relationship, if any, teacher self-efficacy has with years of teaching experience and teacher outcomes. Drawing upon existing literature (Bullock, Coplan, & Bosacki, 2015), it is hypothesized that Universal prekindergarten (UPK) and Early prekindergarten (EPK) teacher self-efficacy would be positively correlated to years of early childhood teaching experience and student engagement, as measured by the Classroom Assessment Scoring System (CLASS) (Pianta, La Paro, & Hamre, 2008). UPK and EPK teacher efficacy is hypothesized to be positively correlated to high CLASS assessment scores.

Previous empirical studies have demonstrated a positive relationship between teacher self-efficacy and student achievement. (Armor et al., 1976; Bandura, 1993; Gibson & Dembo, 1984; Goddard et al., 2000). Teacher self-efficacy has previously been positively correlated to student gains across various academic subject areas at the elementary and middle school level, such as in English/language arts, math, and social studies (Armor et al., 1976). Armor et al. (1976) found that teacher self-efficacy correlated to reading achievement in inner-city sixth-grade students attending public schools within urban districts in the United States.

Classroom quality and best practices may at times be included by teacher self-efficacy. (Goddard & Goodard, 2001). In other words, self-efficacy indirectly affects student achievement through classroom quality. To date, however, very few studies have

directly explored the hypothesized correlation between self-efficacy and student achievement with respect to the potential moderating role of classroom quality (Guo et al., 2011b, 2010).

The quality of the classroom atmosphere has been measured by two domains of the CLASS, primarily the emotional support and instructional support domain is made up of two domains (Mashburn et al., 2008). The emotional support domain measures the extent to which teachers are emotionally engaged with their students. The instructional support domain measures the verbal interactions between a teacher and their students. Teachers who were rated as providing instructionally supportive classroom environments did so by asking open-ended questions, engaging their children in continuous feedback loops, and used scaffolding concepts of instruction (Mashburn et al., 2008; Pianta et al., 2008). Emotional support and the instructional support domains of the CLASS have been associated with student achievement in the empirical research conducted in the United States (Pianta et al., 2008; Pianta, La Paro, Payne, Cox, & Bradley, 2002; Mashburn et al., 2008). Language and literacy development among preschool children is an important characteristic that has been observed to be impacted by teacher student interactions in the classroom. (Meisels, 2006).

The links between teacher self-efficacy and classroom quality have been suggested through the findings of several studies (Ashton & Webb, 1986; Gibson & Dembo, 1984). For instance, Justice et al. (2008) found that teacher self-efficacy was positively correlated to the literacy instruction at the preschool level. However, other types of measures have also been studied to see if any relationship between student achievement could be found. Type of educational background, years of teaching

experience, and professional development have been found to both support and contradict findings of student achievement (Justice et al., 1998).

The documented relation between teacher self-efficacy and higher levels of instructional quality within preschool settings is not unexpected (Guo et al., 2010). Tschannen-Moran et al. (1998) proposed that teacher self-efficacy may impact how much effort teachers put forth in the daily educational process of educating children.. Therefore, teachers with high levels of self-efficacy are more likely to “employ a pattern of strategies that minimized negative effect, and promoted an expectation of classroom situation characterized by warm interpersonal relationships and academic work” (p. 125). Teacher factors, such as education background, years of teaching experience, and certification, have yielded mixed outcomes when correlated with teacher self-efficacy (Early et al. 2007; Guo et al., 2011a, 2010).

In addition, Goddard and Goddard (2001) found that a relationship existed between classroom planning and teacher self-efficacy. Classroom factors, such as performance of students and quality programming, have also yielded mixed results regarding teacher self-efficacy and student outcomes (Zan & Donegan-Ritter, 2014). However, with the exception of Justice et al. (2008), previous studies have failed to consider what relationship, if any, existed between the classroom quality the teacher was able to develop and nurture and their self-efficacy in a preschool setting. (Guo et al., 2010).

Research Questions

Within research conducted in the United States, Wolters and Daugherty (2007) found that more experienced preschool through 12th grade teachers’ self-reported higher

self-efficacy than their peers with fewer years of teaching experience. In China, Cheung (2008) found that for both Hong Kong and Shanghai elementary school teachers, longer teaching experience was a significant predictor of higher teacher efficacy. However, studies conducted in the United States by Guo et al. (2010) reported that more experienced preschool teachers with greater years of teaching experience was not positively correlated to teacher self-efficacy, but rather it was negatively correlated to teacher self-efficacy. Since contradictory findings exist, the direct correlation between teaching experience, teacher assessment outcomes, and sense of efficacy requires further investigation, particularly for preschool teachers as this group has rarely been studied in the literature.

Drawing upon existing literature (Bullock et al., 2015), this researcher has developed two research questions:

1. What relationship, if any, does Early prekindergarten (EPK) and Universal prekindergarten (UPK) teacher self-efficacy have with years of early childhood teaching experience?
2. What relationship, if any, does teacher self-efficacy have with teacher outcomes as measured by the CLASS assessment?

The research study explored what relationship, if any, exists between preschool teacher self-efficacy, years of early childhood teaching experience, and teacher outcomes as measured by the CLASS. The research looked to discern if there is a correlation between teacher self-efficacy and CLASS scores. For the purpose of the research, teacher self-efficacy was measured by the 24-item survey instrument developed by Tschannen-Moran and Woolfolk Hoy (2001).

It is important to note that all of the EPK and UPK teachers in this study educated children who resided within the same school district. However, not all of the EPK and UPK teachers were employees of the school district. A majority of EPK and UPK teachers were employees of various center-based organizations (CBO), such as Head Start. Whether employed by the school district or a CBO, all teachers must meet the same qualifications to teach in an early childhood education setting, such as an EPK and/or UPK classroom. In New York State, minimum qualifications to be considered eligible for an EPK and/or UPK teaching position are met when the teacher has earned a bachelor's degree in early childhood education, as well as a Birth-Second Grade teaching license (NYSED, 2015). A more specific overview of school district teachers and CBO teachers is described in Chapter 3.

Significance of the Study

It has been suggested that teachers' sense of self-efficacy supports a child's cognitive functioning and academic growth (Goddard & Goddard, 2001). To date, however, relatively little is still known about what relationship, if any, teacher self-efficacy has with student achievement, and what role classroom quality may play in that relationship. (Bullock et al., 2015). It is important to note that previous empirical studies have found a relationship indeed existed between student outcomes and classroom quality. (Pianta et al., 2008).

Extant research supports the notion that teacher self-efficacy is an important teacher characteristic related to student achievement (Ashton et al., 1984). Additional research is needed to develop a more thorough understanding of the relationship that years of preschool teaching experience and teacher outcomes may have with teacher self-

efficacy. This research study adds to the larger body of knowledge examining the relationship between early childhood education teaching experience, classroom teacher outcomes measured by the CLASS, and teacher self-efficacy (Bullock et al., 2015).

Definition of Terms

Center Based Organization (CBO) Teacher – an instructor who is not employed by a public school district. A teacher employed by a CBO is not eligible to be granted tenure by a public school district, nor is he or she eligible to contribute to the state teacher retirement system. However, CBO teachers are required to meet the same credentialed qualifications that public school district teachers must meet (Early Childhood Education Bachelor’s Degree and a teaching license credential of Birth-Second Grade).

Classroom Assessment Scoring System (CLASS) – a valid and reliable observational tool developed by Pianta et al. (2008), designed to measure the quality of teacher-child interactions. The CLASS is composed of three subscales: (a) emotional support, (b) classroom management, and (c) instructional support.

Early Childhood Education (ECE) –the process of giving systematic instruction to children from birth through second grade (NYSED, 2015).

Early prekindergarten (EPK) – the education of children who will turn 3 years old before December 1 of the academic year (NYSED, 2015).

Highly Qualified Teacher – educators who have earned a bachelor’s degree, meet state licensing standards, and demonstrate competence in the content they teach (No Child Left Behind, 2001).

Public School District Teacher – an educator who is a direct employee of the school district they are teaching in. This educator is part of the state retirement system

and eligible to be granted tenure after a specified number of years (typically after 3-4 years of continuous teaching).

Self-Efficacy – “the beliefs in one’s capabilities to organize and execute the courses of action required to produce given attainments” (Bandura, 1977, pg. 3).

Teacher Self-Efficacy – an educator’s belief that his or her capabilities positively affect students’ behavior and achievement (Gibson & Dembo, 1984).

Teachers’ Sense of Efficacy Scale (TSES) – a measure of educators’ evaluations of their own likely success in educating. Teacher efficacy is measured by the TSES long (24-item) and short (12-item) forms. The TSES is associated with three areas of teaching: (a) efficacy for classroom management (CM), (b) efficacy to promote student engagement (SE), and (c) efficacy in using instructional strategies (IS) (Tschannen-Moran & Woolfolk Hoy, 2001). Permission to use the TSES can be found in Appendix A.

Universal prekindergarten – the education of children who turn 4 years old before December 1 of the academic year, the year before the child is to enroll in kindergarten (NYSED, 2015).

Chapter Summary

Previous research has suggested that a greater focus of attention has been placed on the quality of preschool programming in the United States. (LoCasale-Crouch et al., 2007). This chapter highlighted the importance of investigating early childhood teacher self-efficacy in relation to years of preschool teaching experience and classroom quality. Internationally, other countries have begun to invest greater time and efforts into the quality of their preschool programming, (Burgess & Fleet, 2009), many of which place a

greater emphasis on teacher performance outcomes and knowledge of improvement within preschool programming. (Ho, 2009).

Teacher self-efficacy has been linked to student achievement in high quality performing preschool classrooms (Guo et al., 2010; Justice et al., 2008). As the primary measure to evaluate program outcomes, the CLASS assessment (Pianta et al., 2008) has been used as a teacher outcome measure in Head Start since 2008 (Infurna et al., 2015).

Chapter 2 contains a comprehensive review of the literature about teacher self-efficacy and classroom quality. Chapter 3 includes an explanation of the methodology used to investigate the research hypotheses. Chapter 4 provides the data analysis and results, and Chapter 5 covers the discussion of the findings, limitations of the study, and implications for research, practice, and policy.

Chapter 2: Review of the Literature

Introduction and Purpose

Policymakers, early childhood practitioners, and researchers have suggested that efforts are needed to ensure the quality of early childhood education programming, especially preschool programming, while also ensuring preschool teachers are held to high standards as well (Barnett, 2003). Previous empirical studies have noted an important link between classroom quality and student achievement (Guo et al., 2010; Justice et al., 2008). To date, relatively little is known about the construct of self-efficacy beliefs among early childhood education (ECE) educators, especially UPK teachers (Bullock et al., 2015).

For example, previous research pertaining to efficacy for classroom management has been conducted almost exclusively among elementary school teachers (Klassen et al., 2011). Very little research has examined the factors associated with preschool teachers' self-efficacy. To fill this critical gap in the literature, teacher and classroom factors associated with preschool teachers' self-efficacy should be studied further (Guo et al., 2011a). Better understanding of those factors that influence self-efficacy may be crucial to ensuring the quality of preschool teachers' instruction. Identifying attributes of teachers and classrooms that are linked to teacher self-efficacy could provide valuable information toward efforts to develop tailored and innovative approaches to increase teacher self-efficacy.

Recently, a greater public focus in the United States has been placed on improving the quality of preschool programming (LoCasale-Crouch et al., 2007). Like initiatives in the United States, an international focus has also been placed on increasing the quality of preschool programming. (Burgess & Fleet, 2009), with a focus of isolating teacher characteristics that may play a role in increasing classroom quality (Ho, 2009).

Previous empirical studies have failed to link various teacher characteristics (years of teaching experience and type of degree) to quality classroom environments (Justice et al. 2008). A teacher characteristic that has been found to have a relationship with quality classroom programming at the preschool level is teacher self-efficacy (Justice et al., 2008). According to Bullock et al. (2015), a research gap persists in early childhood education teacher self-efficacy, specifically within the preschool teacher population. For this study, preschool teacher self-efficacy is examined to close the UPK self-efficacy research gap.

In addition, Wang, Hall, & Rahimi (2015) reported that higher self-efficacy regarding student engagement and classroom management predicted greater job satisfaction in teachers. Previous studies (Cheung, 2008; Hoy & Woolfolk, 1993; Wolters & Daugherty, 2007) found a positive relationship existed between teacher self-efficacy and teaching experience among preschool and elementary teachers. Guo et al. (2011a), in contrast, reported that preschool teaching experience negatively correlated to self-efficacy. With contradictory findings in the literature, the direct correlation, if any, between teaching experience and sense of efficacy requires further investigation (Guo et al., 2011a). For the purpose of this study, Appendix B displays the types of teacher self-

efficacy scales that have been developed by different researcher(s), and the year in which the researchers published their findings.

Teacher self-efficacy and experience. Self-efficacy influences the teaching and learning processes like high self-efficacy increases a teacher's enthusiasm for teaching (Allinder, 1994), and self-efficacy has also been positively correlated with teachers' efforts to enhance their teaching skills (Tschannen-Moran & Woolfolk Hoy, 2001). Accordingly, it can also be said that the self-efficacy of pre-service early childhood teachers is a valuable predictor of the teachers' future practices (Sak, 2015). Researchers have suggested that differences in teacher characteristics may affect teachers' sense of efficacy. Teaching experience may be one teacher characteristic that is related to teacher self-efficacy, but findings have been inconsistent (Guo et al., 2011a).

In a quantitative study, Guo et al. (2011b) examined the relationship between teaching experience, teachers' sense of community, and children's engagement with teacher self-efficacy. A 20-item version of Bandura's (1997) teacher self-efficacy scale was used to measure teachers' sense of efficacy. The questionnaire assessed teachers' instructional and disciplinary self-efficacy, as well as teacher efficacy to create a positive school climate. Children's engagement was assessed by using the CLASS (Pianta et al., 2008). Two questionnaires were completed by 48 preschool teachers, dispersed among 38 different preschool centers. All 48 teachers had a CLASS observation completed by a CLASS master observer. Of the 38 reported preschool centers, 27 centers were affiliated with Head Start, and 11 centers were state-funded prek/Title I centers. Guo et al. (2011b) reported that teacher collaboration and teacher decision-making influence were both positively associated with teacher self-efficacy. Teaching experience, as measured in

total years of teaching, was positively related to children's engagement. However, teaching experience and children's engagement, as measured by the CLASS assessment, did not correlate with self-efficacy. Teachers that perceived higher levels of collaboration in their building was shown to be a predictor of child engagement and individual teacher self-efficacy. Furthermore, preschool teacher self-efficacy was predicted by the interaction between the teachers' sense of collaboration and children's engagement. This second finding suggests that teachers' sense of collaboration is essential in fostering teacher self-efficacy, which expands the growing literature supporting the importance of encouraging professional collaboration among teachers (Guo et al., 2010; Woolfolk Hoy & Spero, 2005).

Sak (2015) conducted a study consisting of 451 (220 male, 231 female) pre-service early childhood teachers from 10 random early childhood education programs in Turkey to examine the self-efficacy of early childhood pre-service teachers in the Middle East, and to test for differences in self-efficacy by gender. All participants were 4th-year university students who had recently completed their student teaching field experiences. The Turkish-language version of the TSES, derived from the original teacher self-efficacy scale developed by Tschannen-Moran and Woolfolk Hoy (2001), was used to measure teacher self-efficacy. The TTSES is made up of three subscales: (a) efficacy for instructional strategies, (b) efficacy for classroom management, and (c) efficacy for student engagement. Independent *t*-tests were conducted to compare pre-service male and female early childhood teachers' self-efficacy. Sak (2015) reported that male pre-service teacher self-efficacy was significantly higher than female pre-service teacher self-efficacy in regards to classroom management. No significant differences between male

and female pre-service teachers in self-efficacy were found regarding instructional strategies. Overall teacher self-efficacy scores showed male pre-service teachers reported higher scores than female pre-service teacher self-efficacy scores.

Woolfolk Hoy and Spero (2005) also used Bandura's (1997) teacher self-efficacy scale in a study consisting of 53 preservice teachers. Participants also completed a 10-item abbreviated version of Gibson and Dembo's (1984) teacher efficacy scale. Results indicated that general teacher self-efficacy increased during student teaching. However, personal teaching self-efficacy increased at the conclusion of student teaching, but then decreased after the first year of teaching, as measured by the Gibson and Dembo (1984) instrument. Using Bandura's (1997) teacher self-efficacy instrument revealed similar results in which teacher self-efficacy increased from the beginning of student teaching to the conclusion of student teaching, and self-efficacy decreased at the conclusion of the first year of teaching.

These findings contradict those of a previous study conducted by Hoy and Woolfolk (1990) in which general teacher self-efficacy decreased during the student teaching year. A sample of 191 student teachers completed a 22-item version of the Gibson and Dembo (1984) teacher self-efficacy instrument before and after their student-teaching experience. Methodologically, Hoy and Woolfolk (1990) separated the two types of efficacies measured by the instrument. A general teacher self-efficacy score was calculated, along with a personal teacher self-efficacy score. Some researchers (Ashton & Webb, 1986; Evans & Tribble, 1986; Guskey, 1988) combined the scores of the general teacher self-efficacy portion of the instrument with the personal teacher self-efficacy scores, thus, using one total efficacy score in their analysis of the data. The

work of Hoy and Woolfolk (1988, 1990) suggests that combining the scores may be misleading. When the scores are combined, it may appear that teachers have higher self-efficacy scores than they really do. General teacher self-efficacy is represented by items that may be out of the control of the teacher, such as family/parent engagement and student assessment implementation. Personal teacher self-efficacy items represent the internal feelings that the teacher has, such as getting through to difficult students, establishing classroom management systems, and fostering student creativity (Tschannen-Moran & Woolfolk Hoy, 2001).

A quantitative study conducted by Rimm-Kaufman and Sawyer (2004) examined the relationship between teaching experience and self-efficacy among 140 teachers who taught kindergarten through third-grade. A 19-item version of the Bandura (1997) TSES was used to gauge teacher self-efficacy. Their findings are consistent with other empirical studies showing a positive correlation between years of teaching experience and teacher self-efficacy (Kim & Kim, 2010; Woolfolk Hoy & Spero, 2005). Tschannen-Moran and Hoy (2007), in a sample of 255 graduate teachers ranging between 1 and 29 years of teaching experience, examined whether or not career teachers had higher senses of teacher efficacy compared to novice teachers, with a mean of 8.2 years ($SD = 6.8$). Career teachers (greater than 4 years of teaching experience) rated themselves significantly higher than novice teachers (less than 4 years of teaching experience) on overall self-efficacy, as well as in the instructional strategy and classroom management domains. No significant difference between career and novice teachers was observed on the student engagement domain. Lower mean self-efficacy beliefs were found in novice teachers compared to career teachers.

The work of Kim and Kim (2010) provided further support that linked years of teaching experience and teacher self-efficacy in their study of 169 early childhood educators who taught children age 0 to 5 years old in 45 preschools and childcare centers across South Korea. A translated version of Bandura's (1997) teacher self-efficacy scale was used to measure self-efficacy, which consists of 30 multi-dimensional and situational questions. Bandura's (1997) questionnaire incorporates a 10-point Likert scale comprising seven constructs of efficacy: (a) efficacy to influence decision-making, (b) efficacy to influence school resources, (c) instructional self-efficacy, (d) disciplinary self-efficacy, (e) efficacy to enlist parental involvement, (f) efficacy to enlist community involvement, and (g) efficacy to develop a positive school environment.. Kim and Kim (2010) found that teacher self-efficacy was positively correlated to teaching experience, corroborating the results found in previously published empirical studies (Woolfolk Hoy & Spero, 2005).

A quantitative study conducted by Bullock et al. (2015) validated the results of the Kim and Kim (2010) study, finding that early childhood educators that had more years of teaching experience than their peers reported higher levels of teacher self-efficacy. Preschool teacher self-efficacy was examined in relationship to classroom management, which was measured by the classroom management subscale of the Tschannen-Moran and Hoy (2001) self-efficacy instrument. In total, 395 early childhood educators from preschool centers in Ontario, Canada completed the teacher self-efficacy scale. In a similar study examining preschool teacher self-efficacy and classroom management, Klassen and Chiu (2010) also reported that years of early childhood teaching experience was positively and significantly correlated to classroom management

self-efficacy. In their quantitative study, 1,430 teachers across Western Canada completed the short version of the teacher self-efficacy scale (Tschannen-Moran & Hoy, 2001). Teachers with an average of 23 years of teaching experience had significantly higher teacher self-efficacy scores than teachers with fewer than 23 years of teaching experience. Student engagement self-efficacy and job satisfaction were also positively correlated to years of teaching experience.

Similarly, a mixed-methods study conducted by Cheung (2008) found that teaching experience was related to teachers' perceived self-efficacy and school efficacy. Primary and elementary teachers from Hong Kong and Shanghai completed the Chinese version of the TSES. A 12-item version of the Tschannen-Moran and Hoy's (2001) TSES was completed by 1,300 teachers. Of the 1,300 teachers, 725 in-service primary and elementary teachers from 28 different schools in Hong Kong participated in the study. Teachers came from schools ranging from government, aided, and private schools to direct-subsidy schools. In Shanghai, 575 in-service primary teachers from 22 different primary schools participated. Among the 575 teachers, 430 were from public schools and 145 were from private schools. Although Shanghai in-service teachers were found to have higher teacher efficacy than Hong Kong in-service teachers, the study showed that some aspects, such as gender and years of teaching experience, might be predictable for both locations (Cheung, 2008).

The association between teacher self-efficacy and student performance was posited to be bidirectional (Ross, 1998), given that it is possible that teachers with more developmentally-oriented beliefs provide higher quality learning opportunities in their classrooms (Pianta et al., 2002). These teachers may elicit a more positive effect and

higher achievement from their students, which, in turn, makes the teachers feel more efficacious. To strengthen the argument positioned by Ross (1998) and Pianta et al. (2005), Jamil, Downer, and Pianta (2007) conducted a study consisting of 509 pre-service teachers' final year at a state university. Teacher self-efficacy was measured by the TSES, long version (Tschannen-Moran & Woolfolk Hoy, 2001). Mastery teaching performance was measured by the CLASS (Pianta et al., 2008). Contrary to expectations, teachers' mastery teaching performance was not a significant predictor of teacher self-efficacy at the end of the student-teaching experience. The results suggest that how teachers performed in the classroom during student-teaching was not related to how confident they felt about the quality of their future performance as teaching professionals (Jamil et al., 2007). Despite prior work on teacher self-efficacy suggesting that mastery experiences provide the most influential information in self-efficacy development, no relationship was reported with teacher self-efficacy (Jamil et al., 2007). These findings might suggest that the structure and formation of teacher self-efficacy beliefs is different in pre-service populations since they have not spent as much time in the classroom (Tschannen-Moran & Woolfolk Hoy, 2001; 2007), relying more heavily on preexisting characteristics of the teachers than actual teaching experiences.

Preschool teacher self-efficacy- literacy/vocabulary. No Child Left Behind (NCLB, 2001) legislation defines “highly qualified” teachers as having a bachelor’s degree, meeting state licensing or certification standards, and demonstrating competence in the content they teach. Yet, teachers’ qualifications, academic major, and general credentials are not consistently linked to improved classroom quality of children’s academic achievement (Early et al., 2007). A relationship between preschool teacher

self-efficacy and classroom instruction has been found in previous empirical studies (Guo et al., 2010, Justice et al., 2008). Some specific evidence has suggested that preschool teacher self-efficacy is indeed a predictor of language and literacy gains of students (Justice et al., 2008).

Justice et al. (1998) examined what relationship, if any, could be observed between classroom quality and self-efficacy. Participating in a larger experimental professional development study, 135 preschool teachers completed a version of Bandura's (1997) self-efficacy instrument. Teacher self-efficacy was not a predictor of vocabulary knowledge, but was a predictor of print awareness (Justice et al., (1998).

In a related quantitative study, Guo et al. (2010) examined what relationship, if any, existed between classroom quality, teacher self-efficacy, and student language and literacy achievement. In total, 67 preschool teachers completed a version of Bandura's (1997) teacher self-efficacy questionnaire. Head Start, independent, and state funded pre-k teachers participated in the study. Specific to this study, the emotional support and instructional support domains of the CLASS (Pianta et al., 1998) were assessed from videotapes collected during a 2-hour standardized classroom observation using the CLASS (Pianta et al., 2008) at two times during the school year. One CLASS observation was conducted in the fall, while the second CLASS observation was conducted in the spring. Children's language and literacy outcomes were measured by four assessments: (a) Peabody Picture Vocabulary Test-III, (b) Preschool Word and Preschool Print Awareness, (c) Alphabet Knowledge Subtest of the Phonological Awareness and Literacy Screening-PreK (PALS), and (d) Name-Writing Subtest of the PALS.

Guo et al. (2010) examined what relationship, if any, teacher self-efficacy and classroom quality had with the development of language and literacy skills of preschool students. Teacher self-efficacy predicted print awareness. Classroom quality was measured by using the emotional support and instructional support domains of the CLASS. Positive trends of predicting significant change in children's vocabulary knowledge was found by examining the two domain scores of the CLASS in correlation with print awareness (Guo et al., 2010). Teacher self-efficacy, however, did not significantly correlate to the emotional support and instructional support domains of the CLASS. Teacher self-efficacy was not a predictor of language and literacy gains of preschool students. The emotional support and instructional support domains of the CLASS did predict student language and literacy gains.

Guo et al. (2010) reported that a teacher self-efficacy was affected by the type of degree a teacher had earned, however, the type of certification a teacher held did affect teacher self-efficacy. Additionally, years of teaching experience with children prior to kindergarten entry did negatively correlate with teacher self-efficacy. These findings by Guo et al. (2010) corroborate those found by Brown and Gibson (1982) and Skaalvik and Skaalvik (2007), in which more years of teaching experience resulted in a lower teacher self-efficacy. Teachers holding elementary certifications reported higher teacher self-efficacy than their peers with different certifications. More years of preschool teaching experience resulted in lower teacher self-efficacy scores. These findings contradict the reported findings of Kim and Kim (2010) and Guo et al. (2011) where it was found that years of teaching experience had a positive correlation with teacher self-efficacy.

Preschool teacher self-efficacy—math. Moving toward another content area concerning the impact of self-efficacy, Brown (2005) examined the relationship between preschool teacher self-efficacy and their beliefs about mathematics instructional practices. In the study, 94 preschool teachers completed the 24-item Tschannen-Moran and Woolfolk Hoy (2001) version of the TSES. The teacher self-efficacy results revealed that early childhood education teachers had developed a positive sense of efficacy about their capabilities to motivate and engage students who were less interested in schoolwork, to control disruptive behaviors in the classroom, and to provide alternative explanations for students.

Gaps and Review of the Literature

To date, relatively little is known about the construct of self-efficacy beliefs among early childhood educators, especially UPK teachers (Bullock et al., 2015). Meisels (2006) noted that early childhood educators and the instructional practices they employ are held to a notably high level of scrutiny and their associated characteristics inform initiatives focused on ensuring that all children enter school ready to learn. Meisels' (2006) observation is pertinent, given national data showing that a substantial proportion of American students fare poorly on measures of reading achievement and the belief that preventive programs may mitigate children's later risks for reading difficulties. Given the indisputable role of early childhood education in the children's outcomes, more research is indicated to examine teacher factors, such as self-efficacy, that predict more positive outcomes for children.

The findings presented by Guo et al. (2011a, 2010) resulted in a clearer understanding in establishing the relationship between classroom quality and teacher self-

efficacy in the preschool classroom. The type of education and background a preschool teacher has may be important to consider when hiring staff for preschool teacher positions (Guo et al., 2010). Teachers that meet state level minimum requirements are highly sought after for placement in preschool classrooms, with the hope of increasing the quality of classroom instruction, with the support of increased public expenditures to ensure quality preschool education (Barnett, 2003).

Chapter Summary

Establishing a stronger research base that examines what relationship may exist between teacher self-efficacy and student achievement is needed, especially at the classroom level where the influence of teacher characteristics plays a critical role in influencing student achievement (Wright, Horn, & Sanders, 1997). The review of literature presented in this chapter focused on the importance of quantitative research examining preschool teacher self-efficacy. Multiple studies showed that student achievement and teacher assessment outcomes are positively correlated to high teacher self-efficacy. Justice et al. (1998) found that one preschool teacher trait that positively affects instruction and student achievement is a teacher's self-efficacy. However, inconsistent results in the literature were found. Highly qualified teachers are being called upon to lead early childhood education classrooms (NYSED, 2015). Regardless of educational background and qualifications, inconsistent evidence still remains as to what variables affect teacher outcomes and student achievement. One variable that has shown to significantly affect student achievement and teacher outcomes is teacher self-efficacy.

Given the inconsistent results found in the literature, this study will examine UPK teacher self-efficacy, measured by the 24-item TSES (Tschannen-Moran & Hoy, 2001),

to identify what, if any, relationship exists between UPK teacher self-efficacy, years of teaching experience (overall and early childhood), and teacher outcomes measured by the CLASS. The results of this study could be important for considering how to improve the quality of preschool programming through an increased awareness of, and support for, teacher self-efficacy. Establishing a possible link between years of teaching experience, teacher self-efficacy, and teacher outcomes would provide evidence to promote a greater awareness and a platform to develop meaningful professional development interventions that would potentially increase teacher self-efficacy. Chapter 3 discusses the methodology used to explore the relationship between preschool teacher self-efficacy, early childhood teaching experience, and teacher outcomes as measured by the CLASS assessment.

Chapter 3: Research Design Methodology

Introduction

The quality of the classroom atmosphere has been measured by two domains of the CLASS, primarily the emotional support and instructional support domains (Mashburn et al., 2008). The emotional support domain measures the extent to which teachers are emotionally engaged with their students. The instructional support domain measures the verbal interactions between a teacher and their students. Teachers who were rated as providing instructionally supportive classroom environments did so by asking open-ended questions, engaging their children in continuous feedback loops, and used scaffolding concepts of instruction (Mashburn et al., 2008; Pianta et al., 2008).

Emotional support and the instructional support domains of the CLASS have been associated with student achievement in the empirical research conducted in the United States. (Pianta et al., 2008; Pianta, La Paro, Payne, Cox, & Bradley, 2002; Mashburn et al., 2008). In the current body of empirical literature focusing on preschool teacher self-efficacy, not many studies have explored what relationship, if any, classroom quality has with teacher self-efficacy (Bullock et al., 2015). Other studies have found a relationship between classroom quality and student outcomes, enforcing the need to focus on this specific body of research. Drawing upon the extant literature (Bullock et al., 2015), the researcher has developed two research questions:

1. What relationship, if any, exists between teacher self-efficacy and years of early childhood teaching experience?

2. What relationship, if any, exists between teacher self-efficacy and teacher outcomes as measured by the CLASS assessment?

Research Context

Pre-collected data from a purposive convenience sample of preschool teachers from a small to mid-size urban school district was used. The school district employs approximately 6,100 staff. Of those 6,100 employees, 3,227 are classroom teachers, of which 140 are preschool teachers of 4-year-old students, and 44 are preschool teachers of 3-year-old children. The school district employs 464 administrators and 1,267 support personnel.

The school district offers 56 preschool sites housed within 20 elementary schools and 36 community-based organization (CBO) sites. Along with the preschool sites and elementary schools, 14 K-8 and K-12 schools house approximately 33,000 prekindergarten-12th grade students. Transportation is provided for 29,875 students daily. The student population percentages are made up of 60.1% African American/Black, 25.6% Hispanic, 10.2% White, and 4.1% Asian/Native American/East Indian/Other students. Approximately 84% of the student population is eligible for free/reduced-price lunches. Special education services are provided to 16.5% of the K-12th grade student population.

Within this district, preschool teacher demographic data was collected. Early prekindergarten and Universal prekindergarten lead teachers were emailed a teacher demographic questionnaire via SurveyMonkey. The data were collected by Research One, a small not-for profit research institution located in Western New York. Research One was contracted by the school district to complete all preschool data analyses and to

provide an end-of-the-year state NYSED report as part of the preschool grant contract. The researcher is an employee of Research One. One of his responsibilities is to be the lead author on the year-end NYSED report. The researcher is responsible for maintaining the preschool teacher demographic database that was collected in January 2016. More information about the EPK program can be found on the New York State Education Department website (NYSED, 2015).

Research Participants and Setting

The sample of participants for this research study consist of a purposive sample of convenience of preschool teachers in 4-year-old and 3-year-old student classrooms working in a small- to mid-sized urban school district located in Western New York. At the time of this writing approximately 96% of the UPK and EPK teachers were female, and 81% of the UPK and EPK teachers earned a graduate degree in early childhood. A degree in early childhood education is defined by the New York State Education Department as having earned a teaching certificate in order to teach children birth to second grade (NYSED, 2015). For the purpose of this study, the researcher distributed 177 demographic questionnaires to 133 UPK lead teachers and 44 EPK lead teachers. The total sample of the UPK and EPK lead teachers was 177 at the time of this writing.

Approximately 75 of the 133 UPK teachers were employed by community-based organizations. The remaining 58 UPK teachers were employed by the school district. As part of the state education department preschool grant, all preschool teachers of 4-year-old students are required to participate in a minimum of 24 professional development hours. The preschool teachers are able to select any combination of professional development trainings of their choosing. Some possible professional development

offerings are focused on curriculum mapping, lesson plan development, CLASS refresher trainings, working with challenging behaviors in the classroom, classroom management, and curriculum implementation strategies.

The remaining 44 teachers who participated in this doctoral study were 3-year-old classroom lead teachers in the EPK program. In total, six of the EPK lead teachers were employed by the school district. The remaining 38 EPK lead teachers were employed by various CBOs. Similar to the UPK teacher requirements, EPK lead teachers are also required by the NYSED grant to complete 24 professional development hours of their choosing.

Procedures for Data Collection and Analysis

Research design. The researcher completed a quantitative correlational cross-sectional research study in which the data on a sample of the respondents (gathered at one point during the research) was chosen to represent a particular target population. The data used for this research study were a series of three pre-collected datasets of responses collected throughout the 2015-2016 school year. The samples collected were contextual in nature and used to accurately describe certain characteristics of the population; in this case, referring to all EPK and UPK teachers within the school district and the CBOs.

Sampling and data collection. A purposive sample of convenience was utilized in this research study. The demographic data was collected by Research One, contracted to complete preschool assessment data analysis by the school district, as part of a state education department preschool grant. At the conclusion of the academic year, Research One produces a technical annual report that provides recommendations to the school district based on student and teacher data collected the previous year. One of the 2015-

2016 recommendations was to examine preschool teacher self-efficacy. As part of those recommendations, EPK and UPK lead teachers completed the 24-item long version teachers' sense of efficacy survey questionnaire (Tschannen-Moran & Woolfolk Hoy, 2001), representing a cross-section of all preschool lead teachers of 4-year-old students, as well as all preschool lead teachers of 3-year-old students.

The 24-item long version of the teachers' sense of efficacy questionnaire was used for this dissertation study. The sample collected for this research ($n = 89$) is one of the largest accumulated compared to the literature, and it was done solely on a population of preschool teachers that also incorporated the Tschannen-Moran and Woolfolk Hoy's (2001) teacher self-efficacy questionnaire (Bullock et al., 2015; Guo et al., 2011, 2010; Mashburn et al., 2008). The EPK and UPK lead teachers were emailed the self-efficacy survey instrument through SurveyMonkey in January 2016, as part of Research One's recommendation to the school district to examine preschool teacher self-efficacy during the 2015-2016 school year. This recommendation was made to the school district in September 2015, as part of the technical report completed by the third-party research institute (Infurna et al., 2015).

Along with collecting preschool teacher self-efficacy data, Research One also collected EPK and UPK teacher CLASS assessment data. The NYSED preschool grant requires all schools receiving the preschool grant to implement a teacher assessment (NYSED, 2015). Consecutively, since 2008, Research One has conducted CLASS assessments each year in all preschool classrooms in the school district (Infurna et al., 2015). The CLASS assessment is required to be completed on a yearly basis by the

school district as part of the NYSED preschool grant. CLASS assessments were completed in all UPK and EPK classrooms ($n = 177$).

The state education department provides a list of teacher assessments that can be implemented during the school year in the school districts that are awarded the preschool grant. The participating school districts selected the CLASS assessment as their teacher outcome tool. Trained and reliable CLASS assessment observers are required to complete all CLASS assessments between February 1, 2016 and May 29, 2016. As an employee of Research One, the researcher's major responsibility is to analyze and disseminate the data in order to produce an annual technical report of the preschool program findings, strengths, weaknesses, policy implications, and future recommendations.

Approval to complete a thorough and detailed analysis of the preschool data is included within the contract the school district has with Research One. As part of the contract between the two parties, the third-party research institute is given full and complete access to the preschool program teacher demographic data, teacher outcome assessments, and student achievement assessments. The memorandum of understanding was signed by Research One and the school district in June 2013.

The researcher used three pre-collected datasets: (a) UPK and EPK teacher demographic information, (b) teacher self-efficacy questionnaire results, and (c) CLASS assessment data on all 4-year-old and 3-year-old preschool classrooms. The researcher used the pre-collected data from the three data sets to test two research questions:

1. What relationship, if any, does teacher self-efficacy have with years of early childhood teaching experience?
2. What relationship, if any, does teacher self-efficacy have with teacher outcomes as measured by the CLASS assessment?

Instruments Used in Data Collection

Demographics. The participants were asked to indicate their gender, race, age, ethnicity, highest degree obtained, program type (UPK or EPK), program location, type of degree earned (birth to second grade, first grade to sixth grade with a birth-to-second-grade extension, or special education birth to sixth grade certification), total years of teaching experience by indicating years on a Likert scale, and years of early childhood teaching experience (birth to second grade) by indicating the years on a Likert scale. The demographic dataset was part of an existing dataset collected in January 2016. The demographic questionnaire was delivered to teachers via SurveyMonkey. The demographic questionnaire stated that it was voluntary for teachers to complete. In total, 177 teacher demographic questionnaires were emailed to teachers. The dataset is maintained and secured by Research One.

Teacher self-efficacy. Teacher self-efficacy was measured by the 24-item, long version of the teacher self-efficacy scale (Tschannen-Moran & Woolfolk Hoy, 2001). Each item was rated on a 9-point Likert scale (from 1 = strongly disagree to 9 = strongly agree). Three domains of teacher self-efficacy comprise the TSES: (a) efficacy for instructional strategies, (b) efficacy for classroom management, and (c) efficacy for student engagement. In previous empirical studies conducted on preschool teacher self-efficacy, the three subscales demonstrated strong scale score reliability and evidence of

validity (Brown, 2005; Klassen & Chiu, 2010; Tschannen-Moran & Woolfolk Hoy, 2001; 2007). “The Teacher’s Sense of Efficacy scale developed by Tschannen-Moran and Woolfolk Hoy (2001) is the most promising measure of teacher efficacy to date that aligns with Bandura’s (1997) social cognitive theory and critics recommendations” (Duffin, French, & Patrick, 2012, p. 828).

Tschannen-Moran & Woolfolk Hoy (2001) employed factor analytic methods to develop and refine the teacher TSES. Both the long form and short form versions of the teacher’s sense of efficacy scale were factor analyzed (Tschannen-Moran & Woolfolk Hoy, 2001). One factor analysis consisted of the responses of 111 pre-service teachers (still enrolled in college). A second factor analysis consisted of the responses of 255 in-service teachers (teachers that have already earned a bachelor’s degree). The 12-item, short version form of the efficacy scale was found to have a strong factor structure compared to the 24-item, long version. The factor loadings of items 1, 2, 3, 4 (instructional strategies), 9, 10, 11, 12 (classroom management), 17, 18, 19, and 20 (student engagement) were all above .61, suggesting strong trait identification (Huck, 2012). The 24-item, long version form of the efficacy scale was found to have a higher Cronbach’s alpha among the three subscales: instruction = .94; management = .91; and engagement = .87 (Tschannen-Moran & Woolfolk Hoy, 2001). Means, standard deviations, and alpha reliability coefficients for the 24-item teacher self-efficacy scale, long form version, are found in Table 3.1, as reported by Tschannen-Moran and Woolfolk Hoy, 2001.

Table 3.1

Long Form 24-Item Teacher Self-Efficacy Scale Reliability Estimates

Variables	Mean	Standard Deviation	Alpha
Student Engagement	7.3	1.1	.87
Instructional Support	7.3	1.1	.91
Classroom Management	6.7	1.1	.90

Teacher outcomes. Teacher outcomes were measured by the CLASS (Pianta et al., 2008), which measures teacher-child interactions in a classroom setting (Pianta et al., 2008). The CLASS comprises a total of 10 dimensions that measure classroom quality. The 10 dimensions make up three separate subscales: (a) emotional support, (b) classroom management, and (c) instructional support. The emotional support domain is made up of four dimensions: (a) positive climate, (b) negative climate, (c) teacher sensitivity, and (d) regard for student perspectives. The classroom organization domain comprises three dimensions: (a) behavior management, (b) productivity, and (c) instructional learning formats. The final domain, instructional support, comprises three dimensions: (a) concept development, (b) quality of feedback, and (c) language modeling. Trained and reliable CLASS observers were assigned to each EPK and UPK classroom. Each observer assigned a subjective score from 1 to 7 to each of the 10 dimensions. The scores ranged in a continuum of low-quality (one, two), medium (three, four, five), and high (six, seven) levels of quality.

Data analysis. The datasets (teacher demographics, teacher sense of efficacy, and CLASS) were used to complete a variety of statistical analyses. The three subdomains of the CLASS assessment were tested with the three subdomains of the

teacher's sense of efficacy scale. The three subdomains of the teacher's sense of efficacy scale were correlated with the teacher demographic dataset. Overall, teacher self-efficacy and CLASS assessment scores were used as variables for the purpose of this study. The research questions sought to answer whether a correlation exists between the CLASS assessment (Pianta et al., 2008) and UPK teacher self-efficacy, and if a correlation exists between UPK teacher self-efficacy and years of early childhood teaching experience.

Chapter Summary

Teacher self-efficacy represents a future-oriented belief about the level of competence a teacher believes she or he will demonstrate when confronted with a given teaching task (Tschannen-Moran, Hoy, & Hoy, 1998). In this regard, teacher self-efficacy can be construed as both task and situation-specific constructs (Tschannen-Moran & Hoy, 2001). Specific domains of teacher self-efficacy that have received previous research attention including student engagement, instructional strategies, and classroom management (Tschannen-Moran & Woolfolk Hoy, 2001).

This study sought to assess the relationship between preschool teacher self-efficacy and teacher outcomes. To date, relatively little is known about the construct of preschool teacher self-efficacy and teacher outcomes (Bullock et al., 2015). Only a handful of previous empirical studies have specifically addressed self-efficacy in early childhood education educators, specifically preschool teachers (Brown, 2005; Guo et al., 2010; Kim & Kim, 2010). This study addresses a current gap in the extant empirical literature exploring preschool teacher self-efficacy, early childhood education teaching experience, and teacher outcomes as measured by the CLASS assessment. Chapter 4

describes the results of the analyses in order to answer the two research questions described by the researcher.

Chapter 4: Results

Research Questions

In Chapter 4, descriptive summaries regarding EPK and UPK teacher self-efficacy, CLASS outcomes, and student achievement are reported. In addition, correlations between teacher self-efficacy, years of teaching experience, and CLASS results are presented. Correlational and descriptive data are presented to answer two research questions:

1. What relationship, if any, does teacher self-efficacy have with years of early childhood teaching experience?
2. What relationship, if any, does teacher self-efficacy have with teacher outcomes as measured by the CLASS assessment?

This research study sought to explore what relationship, if any, exists between UPK and EPK teacher self-efficacy, years of early childhood teaching experience, and teacher outcomes as measured by the CLASS.

Data Analysis and Findings

Pre-collected datasets completed by UPK and EPK lead teachers were used. EPK and UPK teachers were emailed a teacher demographic questionnaire via SurveyMonkey in January 2016. In total, 177 teacher demographic questionnaires were distributed. Of the 177 distributed teacher demographic questionnaires, 120 were returned (68%). It is important to note that of the 120 returned demographic questionnaires, some teachers failed to entirely complete them. For example, of the 120 returned demographic

questionnaires, only 110 (92%) of the teachers entered their date of birth. Also included with the teacher demographic questionnaire was the 24-item teacher self-efficacy questionnaire (Tschannen-Moran & Woolfolk Hoy, 2001).

Of the 177 distributed questionnaires, 120 were returned for a 68% return rate. Of the 120 returned questionnaires, 111 (93%) indicated the gender as female, while five (4%) indicated the gender as male. Four teachers did not indicate their gender (3%). CBO teachers comprised of a majority of the respondents (52%). Seven teachers did not indicate whether they were employed by the school district or were a CBO. The certification status of the teachers was comprised: provisional (35), professional (23), and permanent (49). With certification status, 13 teachers did not indicate their current level of New York State Certification. The teachers indicated their highest earned degree was a graduate degree (82%), bachelor's degree (16%), and other type of degree (2% with their doctorates). A majority of the teachers indicated they were White (87%) and non-Hispanic (95%). The mean age of the teachers was 40.7, with a standard deviation of 12.9 ($n = 110$). See Appendix C for a frequency distribution of the 120 respondents of early childhood years of teaching experience $n = 118$).

Teacher Self-Efficacy and Years of Experience

Teacher self-efficacy descriptive statistics. Teacher mean self-efficacy scores by domain are found in Table 4.1 (see Appendix D for teacher self-efficacy item mean and standard deviation).

Table 4.1.

Teacher Self-Efficacy Subscale Score Means and Standard Deviations (n = 89)

Domain	Mean	Standard Deviation	Minimum	Maximum
Student Engagement	7.4	1.0	4.6	9.0
Instructional Support	7.3	1.1	4.8	9.0
Classroom Management	7.4	1.0	5.0	9.0
Overall Teacher Self-Efficacy	7.4	1.0	4.8	9.0

Overall teacher self-efficacy is one of the highest reported in any empirical study solitarily focused on preschool teachers (Bullock et al., 2015; Guo et al., 2011a, 2010; Kim & Kim, 2010; Woolfolk Hoy & Spero, 2005). Years of teaching experience are found in Table 4.2.

Table 4.2

Years of Teaching Experience Means and Standard Deviations (n = 120)

Type of Experience	N	Mean	Standard Deviation	Minimum	Maximum
Career	118	11.4	8.2	1	>30
Early Childhood	118	10.2	7.5	0	>30
Current Site	117	5.1	6.2	0	27
Other Site	115	7.0	6.5	0	27
Poverty	117	10.0	7.7	0	>30
Other Than ECE	117	2.6	4.8	0	>30

The relationship between years of teaching experience descriptive statistics.

A majority of the teachers (65%) completed the years of teaching experience section of the teacher demographic questionnaire. Career years of teaching experience is defined as the total number of years of teaching experience. For this research study, the mean career years of teaching experience is 11.9 years. Included in this research study are six types of teaching experience variables:

- *Career years* represents the total number of years of teaching experience.
- *Early childhood* is defined as teaching from birth through the second grade (NYSED, 2015).
- *Current site* refers to the amount of years of experience working within the teachers' current location sites.
- *Other site* refers to the amount of years of experience working in any other site besides the one the teachers were working in at the time of this study.
- *Poverty* refers to the amount of years of teaching experience with children living in poverty.
- *Other than ECE* refers to years of teaching experience in grades other than from birth through the second grade (early childhood education).

Years of teaching experience and teacher self-efficacy. Pearson correlation coefficients were computed to determine if a relationship exists between teacher self-efficacy and years of early childhood teaching experience. Pearson correlations between teacher self-efficacy and years of teaching experience are found in Table 4.3. A very weak relationship exists between teacher self-efficacy and years of early childhood teaching experience ($r = .11$), not reaching significance.

Table 4.3

*Intercorrelations Between Teacher Self-Efficacy and Years of Teaching Experience**(Full Sample: N = 79)*

Variable	1	2	3	4	5	6	7	8	9	10
1. Student Engagement	–	.86*	.77*	.94*	–.01	.07	.12	–.21	–.01	–.23*
2. Instructional Support		–	.76*	.94*	.03	.12	.15	–.14	.05	–.29*
3. Classroom Management			–	.91*	.07	.11	.18	–.11	.09	–.11
4. Teacher Self-Efficacy				–	.04	.11	.16	–.16	.07	–.23*
5. Career					–	.87*	.57*	.66*	.81*	.16*
6. ECE						–	.66*	.55*	.80*	.03
7. Current Site							–	–.01	.71*	.20*
8. Other Site								–	.46*	.13
9. Poverty									–	.24*
10. Other Than ECE										–

Note. * $p < .05$

Table 4.3 shows moderately weak correlations between years of teaching experience in grades greater than third and in student engagement ($r = -.23, p < .05$), instructional support ($r = -.29, p < .05$), and overall teacher self-efficacy ($r = -.23, p < .05$). This finding suggests that a teacher with more years of teaching experience in other grades besides birth-second grade does not feel highly efficacious in an EPK or UPK classroom within the studied school district. Similar to previous empirical studies, career years of teaching experience had a weak positive relationship with instructional support, classroom management, and teacher self-efficacy that did not reach significance at $p < .05$ (Brown & Gibson, 1982; Skaalvik & Skaalvik, 2007). A weak negative correlation was also found between student engagement ($r = -.02$) that did not reach significance.

A series of t -tests were conducted to explore the potential differences between teacher self-efficacy based on race, gender, certification status, EPK/UPK teacher, and

school district/CBO teacher. No differences in teacher self-efficacy were found; however, there was a moderate statistically significant difference in self-efficacy between school district EPK/UPK teachers and CBO EPK/UPK teachers. Table 4.4 depicts teacher self-efficacy by program, concerning whether a teacher was a direct employee of the school district or an employee of a CBO. Results from an independent samples *t*-test demonstrated a significant difference ($t = 2.58$; $p < .05$) between school district teacher self-efficacy and CBO teacher self-efficacy.

Table 4.4

Teacher Self-Efficacy by Program Type

Domain	CBO ($n = 44$)		District ($n = 37$)		t	p
	Mean	SD	Mean	SD		
Overall Teacher Self-Efficacy	7.2	0.9	7.7	1.0	2.58	<.05

Teacher Self-Efficacy and Teacher Outcomes

Table 4.5 depicts the CLASS scores of the EPK and UPK teachers for the 2015-2016 school year. The overall CLASS score mean for this sample of EPK and UPK teachers was 5.4, which is slightly below the overall CLASS mean of a similar sample of UPK teachers measured in the 2014-2015 school year. Infurna et al. (2015) found the CLASS mean of 133 UPK-only teachers to be 5.6.

Table 4.5

CLASS Domain Scores (n = 89)

Domain	Mean	Standard Deviation
Emotional Support	6.5	0.5
Classroom Organization	6.0	0.6
Instructional Support	3.7	1.0
Overall CLASS Score	5.4	0.6

In order to answer the researcher's second research question, Pearson correlation coefficients were computed to measure what relationship, if any, existed between teacher self-efficacy and CLASS outcomes. Table 4.6 reports the findings between CLASS scores and teacher self-efficacy.

Table 4.6

*Intercorrelations Between CLASS Scores and Teacher Self Efficacy**(Full Sample: N = 78)*

Variable	1	2	3	4	5	6	7	8
1. Student Engagement	–	.73*	.57*	.82*	.19	.12	.18	.18
2. Classroom Organization		–	.65*	.89*	.19	.17	.23	.21*
3. Instructional Support			–	.90*	.19	.14	.22*	.20
4. Overall CLASS Score				–	.21*	.15	.24*	.22*
5. Student Engagement					–	.86*	.76*	.94*
6. Instructional Strategies						–	.75*	.93*
7. Classroom Management							–	.90*
8. Teacher Self-Efficacy								–

*Note. *p < .05*

A clear relationship exists between teacher outcomes and teacher self-efficacy as measured by the CLASS. Overall, teacher self-efficacy positively and significantly correlates with classroom organization ($r = .21$) and overall CLASS scores ($r = .22$). The classroom organization domain of the CLASS positively and significantly correlates with the classroom management domain ($r = .23$) and teacher self-efficacy ($r = .21$). The instructional support domain of the CLASS positively and significantly correlates with classroom management domain ($r = .22$) of teacher self-efficacy. Overall CLASS scores positively and significantly correlate with student engagement ($r = .21$), classroom management ($r = .24$), and teacher self-efficacy ($r = .22$). Of note is that the emotional support domain of the CLASS does not correlate with the three domains of teacher self-efficacy and overall teacher self-efficacy.

Summary of Results

Chapter 4 provided a detailed analysis of data collected from Early prekindergarten and Universal prekindergarten teachers in a small to mid-size urban school district. The survey participants included EPK and UPK teachers that were employed by the school district and surrounding CBOs. The sample contained 120 teachers ranging from no years of teaching experience to greater than 30 years of teaching experience. In total, 97 teachers filled in their date of birth, resulting in a mean age of 40.9 year and a standard deviation of 13.4.

The candidate's first research question sought to determine what relationship, if any, existed between teacher self-efficacy and years of early childhood teaching experience. The results of the data analysis for research question 1 reported a very weak, non-significant relationship between teacher self-efficacy and years of early childhood

teaching experience. This finding contradicts those found in previous empirical studies in which years of early childhood teaching experience was negatively correlated with teacher self-efficacy (Guo et al., 2010). However, a moderately weak correlation was found between the years of teaching experience in grades greater than third and student engagement, instructional support, and overall teacher self-efficacy.

The candidate's second research question sought to determine what relationship, if any, existed between teacher outcomes as measured by the CLASS and teacher self-efficacy. Overall, teacher self-efficacy was positively and significantly correlated with the classroom organization ($r = .21$) and overall CLASS scores ($r = .22$). The classroom organization domain of the CLASS positively and significantly correlated with the classroom management domain ($r = .23$) and overall teacher self-efficacy ($.21$). The instructional support domain of the CLASS positively and significantly correlates with classroom management ($r = .22$) domain of teacher self-efficacy. Overall CLASS scores positively and significantly correlate with student engagement ($r = .21$), classroom management ($r = .24$), and teacher self-efficacy ($r = .22$). Of note is that no significant relationship was found between the emotional support domain and any teacher self-efficacy domain. This outcome will be discussed in Chapter 5.

Chapter 5: Discussion

Introduction

The purpose of this dissertation study was to determine what relationship, if any, teacher self-efficacy had with years of early childhood teaching experience and teacher outcomes as measured by the CLASS. The researcher completed a quantitative cross-sectional research study. The data were collected from participating respondents chosen to represent a specific target population, which was gathered at one point in time.

Empirical studies have attempted to link various teacher and classroom traits to the success of students in early childhood classrooms (Guo et al., 2010; Justice et al., 2008). These studies established the importance of a preschool teacher's self-efficacy in relationship to classroom quality, cognitive development, and child academic achievement (Guo et al., 2010; Justice et al., 2008). However, to date, relatively little is still known about preschool teacher self-efficacy and teacher outcomes (Bullock et al., 2015). This research study serves to address a current gap in empirical research where preschool teacher self-efficacy is the sole focus of the study.

Implications of Findings

Teachers' self-efficacy refers to a teacher's beliefs in his or her capability to successfully complete teaching responsibilities in his or her classroom (Tschannen-Moran et al., 1998). Empirical studies focusing solely on preschool teacher self-efficacy and outcomes are inconsistent. Among preschool teachers, Justice et al. (1998) found teachers' self-efficacy and the CLASS domains of classroom management and

instructional support positively correlated with teacher self-efficacy. In a similar study, no relationship was found between teacher self-efficacy and the CLASS domains of instructional support and emotional support (Guo et al., 2011a). This research study sought to determine what relationship, if any, exists between teacher self-efficacy, years of early childhood teaching experience, and teacher outcomes measured by the CLASS.

Teacher self-efficacy. The TSES developed by Tschannen-Moran and Woolfolk Hoy (2001) was designed to assess teacher self-efficacy in elementary, middle, and high school teachers. Bullock et al. (2015) reported, “the TSES demonstrated a unified factor structure with high internal consistency, results that were comparable to studies with elementary school teachers” (Tschannen-Moran & Woolfolk Hoy, 2001, p. 179). In this current study, complete TSES data were collected from 89 early childhood education teachers in a small- to mid-sized urban school district. The overall teacher self-efficacy mean was 7.4, similar to previous empirical studies (Fantuzzo et al., 2012; Klassen & Chiu, 2010; Kotaman, 2010) that measured self-efficacy with the TSES in a sample of preschool teachers. It can be suggested that early childhood education teachers may tend to have higher efficacy than their peers who teach in the middle school or high school setting.

Research question 1. The candidate’s first research question sought to determine what relationship, if any, existed between teacher self-efficacy and years of early childhood teaching experience. In total, 89 teachers answered all of the demographic questions and teacher self-efficacy questions. Pearson correlation coefficients were computed to answer research question 1. The analysis determined that a very weak relationship existed between teacher self-efficacy and years of early childhood teaching

experience ($r = .11$), not reaching significance ($p < .05$). This finding contradicts the finding of a previous study conducted with preschool teachers as the sole focus. Guo et al. (2010) found that years of early childhood teaching experience was negatively correlated with teacher self-efficacy. This is an interesting finding. To an outside observer, one might presume that having more years of teaching experience in a birth-second-grade classroom would provide the classroom teachers with the time to acquire the skill set that would permit them to be more efficacious in the EPK/UPK classroom.

This research study found that teachers with more years of early childhood teaching experience did not self-report having higher self-efficacy compared to their peers that reported having fewer years of ECE teaching experience. As previously discussed, one might presume that having more years of teaching experience in an early childhood education classroom (birth to second grade) would better prepare an individual for the rigors of educating 3- and 4-year-old children. However, this notion was not consistent with the findings of this research study. No significant correlation was found between years of early childhood teaching experience and teacher self-efficacy.

This research study found a moderately negative correlation between years of teaching experience outside of the birth to second grade classroom and teacher self-efficacy. One might conclude that a teacher who has a vast amount of experience in the upper elementary grades (third through sixth) would not find the transition to the early childhood setting as rewarding. The findings of this research study suggest that a teacher with a great amount of experience in other grades besides birth through second may find it difficult to transition to, and find success in, an EPK or UPK classroom. These findings call into question a policy that currently exists within the school district in which

the data were collected: that, in the spring of every school year, teachers may volunteer to transfer from their current elementary building and grade level to a different elementary building and grade level, with the stipulation that they have the proper certification to teach in the new grade. For example, seventh grade math teachers cannot volunteer to transfer into a first-grade classroom if they do not have the proper certification. However, if that seventh grade math teacher was certified to teach in a first grade classroom, they may bump a first-grade teacher if that first-grade teacher has fewer years of employment within the school district.

In the school district where this study was conducted, lead teachers rarely voluntarily transferred into UPK classrooms within the school district. A teaching assistant who is assigned to a particular classroom may transfer or transition into other grade levels based on building and school district needs. The continuity of care among teaching teams in the school district can be disrupted every school year with the transitioning of teaching assistants. As part of the New York State EPK/UPK grant, each classroom must have a lead teacher and a teaching assistant in each room (NYSED, 2015). That is not the case in the CBO or Head Start classrooms. As a former employee of a CBO within the school district, and based on observational data, teaching teams rarely are changed to ensure the continuity of the teaching team educating the young children.

The impact on children can be profound if a teaching team is brought together at the beginning of the school year without having developed a trusting relationship with the 3-year-old and 4-year-old children. Continuity of care is a topic that Research One has previously been cited as being a variable that has a direct effect on student achievement

(Story et al., 2014). Story et al. (2014) found that when a change in classroom staff occurred during the academic year, UPK children did not make as large gains as their peers in which the teaching team in their classroom remained intact. The ability to transfer classrooms within the school district is a term collectively bargained by the school district and the teachers' union. It is currently unknown what the impact is on children in a classroom, within this district, with a teaching team that has never taught together before, compared to a teaching team with previous years of teaching experience together in the same classroom.

This research study found a moderately weak correlation between years of teaching experience outside of the early childhood classroom and the student engagement and instructional support domains of the teacher self-efficacy questionnaire. Similar to previous empirical studies, this finding suggests that a teacher with more years of teaching experience in grades greater than second would not feel as efficacious in an EPK or UPK classroom (Brown & Gibson, 1982; Skaalvik & Skaalvik, 2007). The implication of this finding, unique to New York State, would suggest that highly skilled and successful teachers in Grades 3-6 would not be better served transitioning into an EPK or UPK classroom in the hopes of achieving similar success.

One significant implication for future research would be to examine what relationship, if any, EPK/UPK teacher self-efficacy has with student achievement. Previous empirical studies have linked teacher self-efficacy with student achievement in language and literacy (Justice et al., 2008) and print awareness (Guo et al., 2010). In the studies conducted by Guo et al. (2010) and Justice et al. (2008), student academic achievement was measured by assessments not in place by the school district in which

this dissertation study was completed. The school district in which the sample EPK/UPK teachers completed questionnaires required the classroom teacher(s) to complete the individual fall/winter/spring student assessments. Teachers who self-reported their own students' academic gains and achievements might come under scrutiny if those data were used to complete a research focused manuscript.

Another implication stemming from the significant difference in school district teacher and CBO teachers self-reported self-efficacy may be that of the self-efficacy of the teaching assistant paired with the lead teacher. It would be interesting to examine what relationship, if any, teaching assistant self-efficacy has with the lead teacher's self-reported self-efficacy. If a significant difference in teacher assistant self-efficacy were to exist between teacher assistants who were employed by the school district and CBOs, it might make a difference in teacher outcomes as measured by the CLASS (Pianta et al., 2008).

As previously discussed in Chapter 1 and Chapter 3, EPK and UPK teachers employed by a public school district in the state of New York need to have earned a bachelor's degree in Early Childhood Education (ECE), with a certification for birth through second grade (NYSED, 2015). The training this particular sample population of teachers receives while enrolled in a teacher education program in New York State may vary greatly, based on the location of the college/university, professor experience, and student-teaching placements. However, as previously discussed, once a teacher is hired by the school district, all teachers receive similar pre-service training. Research One conducts training for EPK and UPK teachers in a variety of topics and domains not limited to student assessment and teacher outcomes. The school district also requires all

teachers to take a minimum of 24 hours of professional development in an area of their choosing. That is where the similarities end and the discrepancies begin.

Three glaring differences exist between teachers employed by the school district and teachers employed by a CBO. First, teachers employed by the school district, on average, are offered a starting salary of \$34,000-\$40,000, based on experience and whether the teacher has already earned a graduate degree. The starting salary of an EPK/UPK teacher in a CBO does not match what a school district teacher earns. Second, teachers employed by the school district are able to invest in the New York State teachers' retirement system. CBO teachers, although certified as New York State teachers, are not able to invest in their retirement through New York State because they are not employees of a public school district. Third, teachers employed by the school district are eligible to be granted tenure after a pre-determined amount of years, typically ranging from 3-4 years based on previous experience and the determination of the school district (NYSED, 2015). EPK and UPK teachers employed by a CBO are considered at-will employees of the state. Therefore, for whatever reason, they can be terminated from their position without due cause. Unlike school district teachers who are paying members of a union, CBO teachers are not offered that type of security from their employer. Due to these three discrepancies, teachers employed by a CBO may not feel as efficacious about their abilities in the classroom because they are not employed by the school district, and they are not provided with the advantage of high pay, tenure, and union support, and they may perhaps feel secondary to their school district peers.

In summary, a wide range of early childhood teaching experience was reported by both EPK and UPK teachers. In total, 86 teachers responded to the question of how

many years of early childhood teaching experience they had. Of the 86 teachers, 53 reported having 10 years or fewer, with an overall teacher self-efficacy mean of 7.31. The remaining 33 teachers reported having more than 10 years of early childhood education teaching experience, while 9 of those 33 teachers reported having more than 21 years of early childhood teaching experience. A series of *t*-tests were conducted to determine whether a difference, if any, existed between their overall teacher self-efficacy means. No statistical difference existed between the mean of the most experienced early childhood education teachers (>21 years, 7.65 mean), mid-range experience teachers (11-20 years, 7.60 mean), and least experienced (<10 years, 7.31 mean). Previous empirical studies focused on early childhood education teachers found that with greater years of teaching experience came reports of higher self-efficacy than peers with fewer years of teaching experience (Kim & Kim, 2010; Klassen & Chiu, 2010; Kotaman, 2010; Wolters & Daugherty, 2007). This finding suggests that years of early childhood teaching experience do not affect a teachers' self-reported self-efficacy.

As previous empirical studies have reported, teacher qualifications, academic major, and credentials, such as certification status, have not been consistently linked to classroom quality or academic achievement in the early childhood classroom (Early et al., 2007; Justice et al., 2008; LoCasale-Crouch et al., 2007). However, all EPK and UPK teachers educating children in the school district described in this dissertation study received the same professional development and training opportunities. Regardless of whether a teacher has had 2, 15, or 25 years of teaching experience, all EPK and UPK teachers are required by the school district to participate in at least 24 professional development training hours per school year. Initially, all EPK and UPK teachers

received a week of professional development training at the end of August, typically a week or two before the start of the new academic year. Teachers are offered training sessions consisting of teacher assessment overviews, curriculum updates, lesson planning, or focused English language arts and math instruction. Therefore, regardless of what point teachers are in their careers, they receive mostly the same support, whether employed by the school district or employed by a CBO. It is difficult to gauge whether administrative support, however great or little, can play into teacher self-efficacy.

This dissertation study collected data from both EPK and UPK teachers educating children within the same school district. As previously discussed in Chapter 3, EPK and UPK sites are located throughout the school district. Teachers are provided with similar opportunities for professional development, which is provided by the school district and community-based organizations. However, not all EPK and UPK teachers are employed by the school district. A series of *t*-tests were conducted to determine if a difference in teacher self-efficacy existed between teachers employed by the school district and by local CBOs. This analysis found a significant difference between the teacher self-efficacy mean of the school district teachers (7.7) and CBO teachers (7.2). This result suggests that teachers employed by the school district feel more efficacious when teaching in an EPK or UPK classroom. This finding has a few significant implications for future research.

Research question 2. The candidate's second research question sought to determine what relationship, if any, existed between teacher self-efficacy and CLASS outcomes. The CLASS assessment is conducted by a third-party observer that has received CLASS training and meets CLASS observer reliability (Pianta et al., 2008) that

is typically over the course of a 2.5 hour in-classroom observation. The observer scores the classroom teacher in three domains, ranging from 1-7 (1 = poor, 3-5 = mid-range, and 7 = excellent): emotional support, classroom management, and instructional support. For a more detailed description of the three domains and the dimensions that make up the domains, please refer to Pianta et al. (2008).

The domain and overall CLASS scores can be found in Table 4.5. Note that the overall CLASS score mean for this sample of EPK and UPK teachers is 5.4, which is slightly below the overall CLASS mean of a similar sample of only UPK teachers observed in the 2014-2015 school year (Infurna et al., 2015). The lower reported CLASS means for the 2015-2016 school year may be the result of a recent addition of EPK programming. New York State awarded school districts with EPK funding in November 2015, thus allowing school districts to begin EPK programming on January 6, 2016. The lower CLASS scores might be a reflection of the lack of preparedness the EPK teachers had with training and professional development.

Correlation coefficients were computed to determine what relationship, if any, teacher self-efficacy had with the CLASS. A clear relationship was found between the CLASS and teacher self-efficacy. All domain and overall scores of teacher self-efficacy and CLASS positively and significantly correlate with each other—except the emotional support domain of the CLASS (Table 4.6). It is interesting to note that the emotional support domain of the CLASS did not correlate with any teacher self-efficacy variable. It is possible that even though teachers report high teacher self-efficacy, their perceived self-efficacy may not be reflected in or a reflection of the emotional relationship they might have with the children in their classrooms.

The emotional support domain of the CLASS (Pianta et al., 2008) measures the caring, warmth, and positive interactions a teacher has with the children in their classroom. The perceived relationship documented by the third-party observer may not necessarily reflect upon that component of the teacher's self-reported self-efficacy. Having said that, the lack of reported correlation between the emotional support domain of the CLASS (Pianta et al., 2008) and teacher self-efficacy domains is a topic that could be studied further in the future. One might presume that teachers who project a classroom of warmth and nurturing relationships would be reflected in how the teachers perceives themselves as having the necessary skills and abilities to positively affect student achievement. This dissertation study did not find that to be true.

Limitations

There were a few limitations to this research study. First, the EPK and UPK teachers who participated in this study were all educating children enrolled in the same school district. It is important to note that the sample population of EPK and UPK teachers only included teachers educating at-risk children within the same school district. Therefore, it is not clear whether these findings about teachers' sense of self-efficacy are generalizable to other populations of EPK and UPK teachers. This finding cannot be generalizable to similar samples of urban school district teachers as well. A future study examining self-efficacy among EPK/UPK teachers from urban, suburban, and rural school districts would be warranted. Replicating this study with EPK and UPK programs that enroll a more diverse population of children is an important next step in future research.

A second limitation was the number of participants that answered all of the demographic and teacher self-efficacy instrument questions. Although a 50% participation rate is considered sufficient (Joyner, Rouse, & Glatthorn, 2013), a greater sample of participants might have provided a richer data set. Furthermore, some of the teachers answered all of the teacher self-efficacy questions, but they failed to answer some of their demographic information (EPK or UPK teacher, school district, or CBO teacher, number of years of teaching experience, and age). Their data were not included in this study because they failed to answer some of the demographic questions mentioned, which led to their responses not being included in the analyses.

A third limitation is that the researcher is an employee of Research One, the research institute that provided the school district with their EPK and UPK teacher assessment and student achievement analyses and reports. Viewed by an outside observer, this might seem to present a possible bias. However, the years of teaching experience and CLASS analyses conducted for the purpose of this dissertation study have been conducted in previous years (Infurna et al., 2015). Therefore, regardless of whether the researcher was an employee of Research One or not, someone in that role would have conducted similar analyses for the school district, based on the memorandum of understanding signed between Research One and the school district. Therefore, the collection of such data is not unique to this candidate because anyone in the candidate's position would be conducting similar analyses in the same manner. My research analyst role at Research One did not impact the research described in this dissertation study.

Recommendations

This dissertation study explored what relationship, if any, teacher self-efficacy has with years of early childhood teaching experience and CLASS outcomes. The results of this research study demonstrate that the sample population of EPK and UPK teachers who participated in this study were optimistic about what they could do in their classrooms to promote student engagement, maintain efficient classroom management techniques, and implement effective instructional strategies that might affect student achievement. However, the results of this dissertation study were limited by the TSES measures implemented here.

The TSES scale developed by Tschannen-Moran and Woolfolk Hoy (2001) was intended to be used as an individual measure of teacher self-efficacy. This survey instrument only assesses individual teacher self-efficacy. However, collective teacher efficacy is another type of teachers' self-efficacy. Collective teacher efficacy represents the judgement of teachers, in the school setting as a whole, regarding "their ability to organize and execute the courses of action required to have a positive effect on students" (Goddard et al., 2000, p. 4). Given that students' achievement and school types have been shown to be associated with teachers' collective efficacy (Chong et al., 2010), a future study should examine teacher and classroom characteristics on EPK and UPK teachers' collective efficacy. In a study investigating the relationship between teacher and collective efficacy in urban schools, Goddard and Goddard (2001) found that teacher self-efficacy varied among participating schools. Teacher self-efficacy was measured by using the 5-item questionnaire developed by Gibson and Dembo (1984). Collective teacher efficacy was measured by a 21-item questionnaire developed by Goddard et al.

(2000). Further exploration of collective teacher efficacy would advance the current body of research toward a better understanding of how collective teacher efficacy correlates with teacher self-efficacy.

The independent samples *t*-test results, depicted in Table 4.4, show a statistically significant difference in overall teacher self-efficacy between EPK and UPK teachers employed by the school district compared to their peers employed by CBOs. Three potential sources of this difference could be teacher salary, ability to contribute to the New York State retirement system, and the ability to be granted tenure. Another potential variable contributing to the difference in teacher self-efficacy is job satisfaction. In a sample of 2,569 Norwegian elementary and middle school teachers, Skaalvik and Skaalvik (2014) found that teacher self-efficacy was positively correlated to job satisfaction. Avanzi et al. (2013) also reported teacher self-efficacy positively and significantly correlated with job satisfaction. A sample consisting of 558 Norwegian elementary classroom teachers participated in the study. TSE was measured by the Norwegian TSES.

Avanzi et al. (2013) confirmed the findings of previous studies conducted by Skaalvik and Skaalvik (2007; 2010) that reported teachers with high self-efficacy are more satisfied with their job and experience less burnout compared with their colleagues. Low teacher self-efficacy may determine burnout or low job satisfaction, but given that efficacy beliefs are founded on experiences, it is also possible that low job satisfaction could influence teacher self-efficacy (Avanzi et al., 2013). A future research study with a sample of EPK and UPK teachers could explore whether a relationship, if any, exists

between job satisfaction, teacher self-efficacy, and years of early childhood teaching experience.

Conclusion

A recent surge of attention has been placed on preschool programming within the United States (Guo et al., 2010). Initiatives developed with the intention of increasing the quality of early childhood education programming have emphasized the development and enhancement of specific classroom and teacher variables, with hopes of improving the current quality of preschool programming in the United States.(Burgess & Fleet, 2009). Educational theory suggests that the teachers, themselves, are one of the most important determinants of whether a classroom exhibits a higher versus a lower quality of instruction (Mashburn et al., 2008). However, empirical studies focused on linking specific teacher and classroom variables have failed to link such characteristics to what teachers actually do in the classroom (Justice et al., 2008).

One preschool teacher characteristic that has been associated with higher quality classroom outcomes is teacher self-efficacy (Guo et al., 2011, 2010; Justice et al., 2008). The construct of self-efficacy evolved from Bandura's (1977) social cognitive theory. Bandura (1977) defined self-efficacy as the "belief in one's capabilities to organize and execute the courses of action required to produce given attainments" (p. 3). These perceived capabilities are believed to influence behavior to achieve a desired outcome. A person may execute the behavior necessary to achieve a series of desired results or outcomes (Czerniak & Chiarelott, 1990). As the concept of self-efficacy is applied to the teaching profession, self-efficacy is defined as the belief that one's capabilities can bring

about desirable change in student achievement and teacher outcomes (Gibson & Dembo, 1984).

The purpose of this dissertation study was to explore what relationship, if any, teacher self-efficacy had with years of early childhood teaching experience and CLASS outcomes. A purposive sample of EPK and UPK teachers completed a demographic questionnaire with an emphasis of years of teaching experience. EPK and UPK teachers also completed the TSES developed by Tschannen-Moran and Woolfolk Hoy (2001). Teacher outcomes were measured by the CLASS assessment for all participating EPK and UPK classrooms. The researcher developed two research questions with the sole purpose of examining what relationship, if any, teacher self-efficacy had with years of early childhood teaching experience and CLASS outcomes.

This research study adds to the current body of early childhood teacher self-efficacy empirical studies in many ways. First, the sole focus of this study was on EPK and UPK teachers employed by both a school district and center based organizations. Second, evidence suggests that the practice of allowing change among EPK and UPK may negatively impact student achievement (Story et al., 2014). However, although evidence suggests that continuity of care is paramount in the success of children in early childhood classrooms, the district in which this study took place continues to allow the practice of movement among teachers and teaching assistants in district EPK and UPK classrooms. Although currently, there is limited evidence of teacher mobility, the potential still exists. It is recommended that future research studies examine not only the continuity of care among teaching teams, but what relationship, if any, teaching assistant self-efficacy plays into EPK/UPK student achievement.

Overall, the results of this dissertation study on EPK and UPK teacher self-efficacy demonstrate that the early childhood educators in this setting are confident in their classroom teaching abilities. As evidenced by the results, the EPK and UPK teachers who participated in this study felt capable in their ability to promote student engagement in their classroom. It is also apparent that the participating teachers feel competent in effective classroom management techniques and routines, and possess effective instructional strategies that may potentially increase student outcomes.

References

- Allinder, R. M. (1994). The relationship between efficacy and the instructional practices of special education teachers and consultants. *Teacher Education and Special Education, 17*, 86-95.
- Armor, D., Cornroy-Oseguera, P., Cox, M., King, N., McDonnell, L., & Pascal, A. (1976). *Analysis of the school preferred reading program in selected Los Angeles minority schools* (Report No. R-2007-LAUSD, ERIC Document Reproduction No. 130 243). Santa Monica, CA: Rand Corporation.
- Ashton, P. T., & Webb, R. B. (1986). *Making a difference: Teacher's sense of efficacy and student achievement*. New York, NY: Longman.
- Ashton, P. T., Buhr, D., & Crocker, L. (1984). Teachers' sense of efficacy: A self or norm-referenced construct? *Florida Journal of Educational Research, 26*(1), 29-41.
- Ashton, P., Olejnik, S., Crocker, L., & McAuliffe, M. (1982). *Measurement problems in the study of teachers' sense of efficacy*. Paper presented at the annual meeting of the American Educational Research Association, New York, NY.
- Avanzi, L., Miglioretti, M., Velasco, V., Balducci, C., Vecchio, L., . . . Skaalvik, E. (2014). Cross-validation of the Norwegian teacher's self-efficacy scale. *Teaching and Teacher Education, 31*, 69-78.
- Bandura, A. (1977). Self-efficacy: Toward a unifying theory of behavioral change. *Psychological Review, 84*, 191-215.
- Bandura, A. (1986). *Social foundations of thought and action: A social cognitive theory*. Englewood Cliffs, NJ: Prentice-Hall.
- Bandura, A. (1993). Perceived self-efficacy in cognitive development and functioning. *Educational Psychologist, 28*, 117-148.
- Bandura, A. (1997). *Self-efficacy: The exercise of control*. New York, NY: Freeman.
- Bandura, A. (2006). Adolescent development from an agentic perspective. In F. Pajares, & T. Urban (Eds.), *Self-efficacy beliefs of adolescents*, pp. 1-143. Greenwich, CT: Information Age Publishing. Retrieved from <http://files.eric.ed.gov/fulltext/ED480818.pdf>

- Barnett, W. S. (2003, March). *Better teachers, better preschools: Student achievement linked with teacher qualifications. NIEER Preschool Policy Matters, Volume 2*. New Brunswick, NJ: National Institute for Early Education Research.
- Barnett, W. S. (2005, April 21). *Testimony of Dr. W. Steven Barnett to the House Subcommittee on education reform. Hearing on "early childhood education: Improvement through integration."* Committee on Education and the Workforce. Retrieved from <http://archives.republicans.edlabor.house.gov/archive/hearings/109th/edr/headstart042105/barnett.htm>
- Berman, P., McLaughlin, M., Bass, G., Pauly, E., & Zellman, G. (1977). *Federal programs supporting educational change. Vol. VII: Factors affecting implementation and continuation* (Report No. R-1589/7-HEW). Santa Monica, CA: The Rand Cooperation.
- Brown, E. T. (2005). The influence of teachers' efficacy and beliefs regarding mathematics instruction in the early childhood classroom. *Journal of Early Childhood Teacher Education, 26*, 239-257.
- Brown, R., & Gibson, S. (1982). *Teachers' sense of efficacy: Changes due to experience*. A paper presented at the annual meeting of the California Educational Research Association, Sacramento, CA.
- Bullock, A., Coplan, R. J., & Bosacki, S. (2015). Exploring links between early childhood educators' psychological characteristics and classroom management self-efficacy beliefs. *Canadian Journal of Behavioral Science, 47*(2), 175-183.
- Burgess, J., & Fleet, A. (2009). Frameworks for change: four recurrent themes for quality in early childhood curriculum initiatives. *Asia-Pacific Journal of Teacher Education, 37*, 45-61.
- Cheung, H. Y. (2008). Teacher efficacy: A comparative study of Hong Kong and Shanghai primary in-service teachers. *The Australian Educational Researcher, 35*, 101-123.
- Chong, W. H., Klassen, R. M., Huan, V. S., & Kates, A. D. (2010). The relations among school types, teacher efficacy beliefs, and academic climate: Perspective from Asian middle schools. *Journal of Educational Research, 103*, 183-190.
- Czerniak, C., & Chiarelott, L. (1990). Teacher education for effective science instruction – a social cognitive perspective. *Journal of Teacher Education, 41*, 49-58.
- Dembo, M., & Gibson, S. (1985). Teachers' sense of efficacy: an important factor in school achievement. *Elementary School Journal, 86*, 173-184.

- Desimone, L., Smith, T., & Frisvold, D. (2007). Has NCLB improved teacher and teaching quality for disadvantaged students. In A. Gamoran (Ed.), *Standards-based reform and the poverty gap: Lessons for 'no child left behind.'* Washington, DC: Brookings Institute.
- Duffin, L. C., French, B. F., & Patrick, H. (2012). The teachers' sense of efficacy scale: Confirming the factor structure with beginning pre-service teachers. *Teaching and Teacher Education, 28*, 827-834.
- Early, D. M., Maxwell, K. L., Burchinal, M., Alva, S., Bender, R. H., & Bryant, D. (2007). Teachers' education, classroom quality, and young children's academic skills: Results from seven studies of preschool programs. *Child Development, 78*, 558-580.
- Evans, E. D., & Tribble, M. S. (1986). *Perceived teaching problems, self-efficacy, and commitment to teaching among preservice teachers*. Paper presented at the annual meeting of the American Educational Research Association, San Francisco, CA.
- Fantuzzo, J., Perlman, S., Sproul, F., Minney, A., Perry, M. A., & Li, F. (2012). Making visible teacher reports of their teaching experiences: The early childhood teacher experiences scale. *Psychology in the Schools, 49*, 194-205.
- Gibson, S., & Dembo, M. (1984). Teacher efficacy: a construct validation. *Journal of Educational Psychology, 76*, 569-582.
- Goddard, R. D., & Goddard, Y. L. (2001). A multilevel analysis of the relationship between teacher and collective efficacy in urban schools. *Teaching and Teacher Education, 17*, 807-818.
- Guo, Y., Justice, L. M., Sawyer, B., & Tompkins, V. (2011a). Exploring factors related to teachers' self-efficacy. *Teaching and Teacher Education, 27*, 961-968.
- Guo, Y., Kaderavek, J. N., Piasta, S. B., Justice, L. M., & McGinty, A. (2011b). Preschool teachers' sense of community, instructional quality, and children's language and literacy gains. *Early Education and Development, 22*(2), 206-233.
- Guo, Y., Piasta, S. B., Justice, L. M., & Kaderavek, J. (2010). Relations among preschool teachers' self-efficacy, classroom quality and children's language and literacy gains. *Teaching and Teacher Education, 26*, 1094-1103.
- Guskey, T. R. (1981). Measurement of responsibility teachers assume for academic successes and failures in the classroom. *Journal of Teacher Education, 32*, 44-51
- Guskey, T. R. (1984). The influence of change in instructional effectiveness upon the affective characteristics of teachers. *American Educational Research Journal, 21*, 245-259.

- Guskey, T. (1988). Teacher efficacy, self-concept and attributes towards the implementation of instructional innovation. *Teaching and Teacher Education, 4*, 63-69.
- Henson, R. K., Kogan, L. R., & Vacha-Haase, T. (2001). A reliability generalization study of the teacher efficacy scale and related instruments. *Educational and Psychological Measurement, 61*, 404-420.
- Ho, C. (2009). Human resource management in Hong Kong preschools: The impact of falling rolls on staffing. *International Journal of Educational Management, 23*, 217-226.
- Hoy, W. K., & Woolfolk, A. E. (1990). Socialization of student teachers. *American Educational Research Journal, 27*(2), 279-300.
- Hoy, W. K., & Woolfolk, A. E. (1993). Teachers' sense of efficacy and the organizational health of schools. *The Elementary School Journal, 93*, 356-372.
- Huck, S. W. (2012). *Reading statistics and Researchm* (6th ed.). Boston, MA: Pearson.
- Infurna, C. J., Hightower, A. D., Van Wagner, G., Strano, L., Lotyczewski, B. S., . . . Embt, K. (2015). *Rochester early childhood assessment partnership 2014-2015 eighteenth annual report*. New York, NY: Children's Institute.
- Jamil, F. M., Downer, J. T., & Pianta, R. C. (2012). Association of pre-service teachers' performance, personality, and beliefs with teacher self-efficacy at program completion. *Teacher Education Quarterly, Fall 2012*, 119-138.
- Joyner, R. L., Rouse, W. A., & Glatthorn, A. A. (2013). *Writing the winning thesis or dissertation: A step by step guide* (3rd ed.). Thousand Oaks, CA: Sage.
- Justice, L. M., Mashburn, A. J., Hamre, B. K., & Pianta, R. C. (2008). Quality of language and literacy instruction in preschool classrooms serving at-risk pupils. *Early Childhood Research Quarterly, 23*, 51-68.
- Kim, Y. H., & Kim, Y. E. (2010). Korean early childhood educators' multi-dimensional teacher self-efficacy and ECE center climate and depression severity in teachers as contributing factors. *Teaching and Teacher Education, 26*, 1117-1123.
- Klassen, R. M., & Chiu, M. M. (2010). Effects on teacher self-efficacy and job satisfaction: Teacher gender, years of experience, and job stress. *Journal of Educational Psychology, 102*, 741-756.
- Klassen, R. M., Tze, V. M. C., Betts, S. M., & Gordon, K. A. (2011). Teacher efficacy research 1998-2009: Signs of progress or unfulfilled promise? *Educational Psychology Review, 23*, 21-43.

- Kotaman, H. (2010). Turkish early childhood educators' sense of teacher efficacy. *Electronic Journal of Research in Educational Psychology, 8*, 603-616.
- Levine, M. H. (2005). Take a giant step: Investing in preschool education in emerging nations: As the global economy expands, emerging nations are finding that focusing on universal primary education is not sufficient, Mr. Levine argues. They are increasingly coming to see the value of investing in early care and education as well. *Phi Delta Kappan, 87*(3), 196.
- LoCasale-Crouch, J., Konold, T., Pianta, R., Howes, C., Burchinal, M., & Bryant, D. (2007). Observed classroom quality profiles in state-funded pre-kindergarten programs and associations with teacher, program, and classroom characteristics. *Early Childhood Research Quarterly, 22*, 3-17.
- Lynch, R., & Vaghul, K. (2015). *The benefits and costs of investing in early childhood education: The fiscal, economic, and societal gains of a universal prekindergarten program in the United States, 2016-2050*. Retrieved from www.equitablegrowth.org
- Mashburn, A. J., Pianta, R. C., Hamre, B. K., Downer, J. T., Barbarin, O., & Bryant, D. (2008). Measures of classroom quality in prekindergarten and children's development of academic, language, and social skills. *Child Development, 79*(3), 732-749.
- Meisels, S. J. (2006). *Accountability in early childhood: No easy answers*. Chicago, IL: Erikson Institute, Herr Research Center for Children and Social Policy.
- New York State Department of Education (NYSED). (2015). *Universal pre-kindergarten certification*. Retrieved from <http://www.p12.nysed.gov/upk/>
- No Child Left Behind Act of 2001 (NCLB), PL 107-110, 20 U.S.C. Retrieved from www.ed.gov/nclb
- Pajares, M. F. (1992). Teacher's beliefs and educational research: Cleaning up a messy construct. *Review of Educational Research, 62*, 307-332.
- Pianta, R. C., La Paro, K. M., & Hamre, B. K. (2008). *Classroom assessment scoring system: Pre-K*. Baltimore, MD: Paul Brookes Publishing.
- Pianta, R. C., La Paro, K. M., Payne, C., Cox, M. J., & Bradley, R. (2002). The relation of kindergarten classroom environment to teacher, family, and school characteristics and child outcomes. *The Elementary School Journal, 102*(3), 225-238.
- Rimm-Kaufman, S. E., & Sawyer, B. E. (2004). Primary-grade teachers' self-efficacy beliefs, attitudes toward teaching, and discipline and teaching practice priorities in relation to the responsive classroom approach. *The Elementary School Journal, 104*(4), 321-341.

- Ross, J. A. (1998). The antecedents and consequences of teacher efficacy. In J. Brophy (Ed.), *Advances in research on teaching*, Vol. 7, pp. 49-73. Greenwich, CT: JAI Press.
- Ross, J. A., Cousins, J. B., & Gadalla, T. (1996). Within-teacher predictors of teacher efficacy. *Teaching and Teacher Education*, 12(4), 385-400.
- Rotter, J. B. (1966). Generalized expectancies for internal versus external control of reinforcement. *Psychological Monographs*, 80, 1-28.
- Sak, R. (2015). Comparison of self-efficacy between male and female pre-service early childhood teachers. *Early Child Development and Care*, 185(10), 1629-1640.
- School Readiness Act, H. R. 2123, 109th Congress. (2005).
- Schunk, D. H., & Meece, J. L. (2006). Self-efficacy development in adolescence. *Self-Efficacy Beliefs of Adolescents*, 5, 71-96.
- Skaalvik, E. M., & Skaalvik, S. (2007). Dimensions of teacher self-efficacy and relations with strain factors, perceived collective teacher efficacy, and teacher burnout. *Journal of Educational Psychology*, 99, 611-625.
- Skaalvik, E. M., & Skaalvik, S. (2009). Does school context matter? Relations with teacher burnout and satisfaction. *Teaching and Teacher Education*, 25, 518-524.
- Skaalvik, E. M., & Skaalvik, S. (2010). Teacher self-efficacy and teacher burnout: A study of relations. *Teaching and Teacher Education*, 26, 1059-1069.
- Skaalvik, E. M., & Skaalvik, S. (2014). Teacher self-efficacy and perceived autonomy: Relations with teacher engagement, job satisfaction, and emotional exhaustion. *Psychological Reports: Employment Psychology and Marketing*, 114(1), 68-77.
- Soodak, L. C., & Podell, D. M. (1996). Teacher efficacy: Toward the understanding of a multi-faceted construct. *Teaching and Teacher Education*, 12(4), 401-411.
- Story, M. A., Hightower, A. D., Buettner, K., Van Wagner, G., Brugger, L., . . . Lubecki, L. (2014, December). *Rochester early childhood assessment partnership 2013-2014. seventeenth annual report*. Technical Report T14-006. Rochester, NY: Children's Institute Inc. Retrieved from https://www.childrensinstitute.net/sites/default/files/documents/recap-seventeenth-annual-report_2013-2014.pdf
- Tschannen-Moran, M., & Woolfolk Hoy, A. (2001). Teacher efficacy: Capturing an elusive construct. *Teaching and Teacher Education*, 17, 783-805.
- Tschannen-Moran, M., & Woolfolk Hoy, A. (2007). The differential antecedents of self-efficacy beliefs of novice and experienced teachers. *Teaching and Teacher Education*, 23, 944-956.

- Tschannen-Moran, M., Woolfolk Hoy, A., & Hoy, W. K. (1998). Teacher efficacy: Its meaning and measure. *Review of Educational Research, 68*, 202-248.
- Wang, H., Hall, N. C., & Rahimi, S. (2015). Self-efficacy and causal attributions in teachers: Effects on burnout, job satisfaction, illness, and quitting intentions. *Teaching and Teacher Education, 47*, 120-130.
- Weiner, B. (1979). A theory of motivation for some classroom experiences. *Journal of Educational Psychology, 71*, 3-25.
- Weiner, B. (1992). *Human motivation: Metaphors, theories, and research*. Newbury Park, CA: Sage.
- Wolters, C. A., & Daugherty, S. G. (2007). Goal structures and teachers' sense of efficacy: Their relation and association to teaching experience and academic level. *Journal of Educational Psychology, 99*(1), 181.
- Woolfolk, A. E., & Hoy, W. K. (1990). Prospective teachers' sense of efficacy and beliefs about control. *Journal of Educational Psychology, 82*(1), 81.
- Woolfolk Hoy, A. E., & Spero, R. B. (2005). Changes in teacher efficacy during the early years of teaching: A comparison of four measures. *Teaching and Teacher Education, 21*(4), 343-356.
- Wright, S. P., Horn, S. P., & Sanders, W. L. (1997). Teacher and classroom context effects on student achievement: Implications for teacher evaluation. *Journal of Personnel Evaluation in Education, 11*, 57-67.
- Zan, B., & Donegan-Ritter, M. (2014). Reflecting, coaching and mentoring to enhance teacher-child interactions in head start classrooms. *Early Childhood Education Journal, 43*, 93-104.

Appendix A

Teacher Sense of Efficacy Scale Author Permission Letter



Anita Woolfolk Hoy, Ph.D.

Professor
Psychological Studies in
Education

November 13, 2015

Dear Charles,

You have my permission to use the *Teachers' Sense of Efficacy Scale* in your research. A copy the scoring instructions can be found at:

<http://u.osu.edu/hoy.17/research/instruments/>

Best wishes in your work,



Anita
Woolfolk
Hoy, Ph.D.
Professor
Emeritus

College of Education
29 West Woodruff Avenue
Columbus, Ohio 43210-1177

www.coe.ohio-state.edu/ahoy

Phone 614-292-3774
FAX 614-292-7900
Hoy.17@osu.edu

Appendix B

Teacher Self-Efficacy Scales and Authors Included in This Research Study

Researcher (Including Year)	Version of Teacher Self-Efficacy Scale	Derived From
Sak (2015)	Turkish version of the Teacher Self-Efficacy Scale—derived from the original TSES by Tschannen-Moran and Woolfolk Hoy (2001)	Tschannen-Moran and Woolfolk Hoy (2001)—24 item long form instrument. Likert scale 1-9.
Woolfolk Hoy and Spero (2005)	Bandura (1997) unpublished Teacher Self-Efficacy Scale. Gibson and Dembo (1984) Teacher Self-Efficacy Scale.	Bandura (1997)—30 item instrument. Likert scale 1-10. Gibson and Dembo (1984)—10 item instrument.
Hoy and Woolfolk (1990)	Gibson and Dembo (1984) Teacher Self-Efficacy Scale.	Gibson and Dembo (1984)—22 item abbreviated version. Likert scale 1-6.
Rimm-Kaufman and Sawyer (2004)	Bandura (1997) unpublished Teacher Self-Efficacy Scale.	Bandura (1997)—19 item version of the original 30 item instrument. Likert scale 1-10.
Tschannen-Moran and Hoy (2007)	Tschannen-Moran and Woolfolk Hoy (2001)	Tschannen-Moran and Woolfolk Hoy (2001)—24 item long version. Likert scale 1-9.
Jamil, Downer, and Pianta (2007)	Tschannen-Moran and Woolfolk Hoy (2001)	Tschannen-Moran and Woolfolk Hoy (2001)—24 item long version. Likert scale 1-9.
Justice et al. (1998)	Bandura (1997) unpublished Teacher Self-Efficacy Scale.	Bandura (1997)—7 item abbreviated version. Likert scale 1-10.
Guo et al. (2010)	Bandura (1997) unpublished Teacher Self-Efficacy Scale.	Bandura (1997)—11 item abbreviated version. Likert scale 1-10.
Bullock et al. (2015)	Tschannen-Moran and Woolfolk Hoy (2001)	Tschannen-Moran and Woolfolk Hoy (2001)—Classroom management portion of the scale. Likert scale 1-9.
Kim and Kim (2010)	Bandura (1997) unpublished Teacher Self-Efficacy Scale.	Bandura (1997)—30 item instrument. Likert scale 1-10.
Klassen and Chiu (2010)	Tschannen-Moran and Woolfolk Hoy (2001)	Tschannen-Moran and Woolfolk Hoy (2001)—12 item short version. Likert scale 1-9.
Cheung (2008)	Tschannen-Moran and Woolfolk Hoy (2001)	Tschannen-Moran and Woolfolk Hoy (2001)—12 item short version. Likert scale 1-9.
Guo et al. (2011a)	Bandura (1997) unpublished Teacher Self-Efficacy Scale.	Bandura (1997)—20 item abbreviated version. Likert scale 1-10.
Brown (2005)	Tschannen-Moran and Woolfolk Hoy (2001)	Tschannen-Moran and Woolfolk Hoy (2001)—24 item long version. Likert scale 1-9.

Appendix C

Years of Early Childhood Teaching Experience

Years of ECE Experience	Number
0	1
1	10
2	7
3	10
4	7
5	6
Total	41
6	7
7	5
8	9
9	3
10	9
Total	33
11	2
12	3
13	1
14	2
15	11
Total	19
16	3
17	1
18	2
19	4
20	4
Total	14
21	1
23	2
24	1
Total	4
26	2
27	2
28	2
29	0
30	1
Total	7
31	1
Cumulative Total	119

Appendix D

Descriptive Statistics for 24-Item Self-Efficacy Question ($n = 89$)

Question	Mean	Standard Deviation
1	7.12	1.59
2	7.28	1.41
3	7.08	1.58
4	7.35	1.40
5	7.88	1.26
6	8.08	1.06
7	7.62	1.19
8	8.13	1.20
9	7.88	1.24
10	7.41	1.25
11	7.37	1.28
12	7.76	1.25
13	7.44	1.38
14	6.74	1.27
15	6.95	1.41
16	7.27	1.53
17	7.56	1.29
18	7.23	1.46
19	6.80	1.49
20	7.47	1.24
21	7.10	1.22
22	7.25	1.30
23	7.38	1.27
24	7.37	1.27